



Via E-mail and Hand Delivery

Oct. 13, 2016

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Re: Application to ADEM for Renewal of Solid Waste Facility Permit 53-03 to Perry County Associates, LLC for the Operation of Arrowhead Landfill in Uniontown, Alabama

Dear Mr. Kelly,

These comments are submitted in opposition to Perry County Associates, LLC's ("PCA's") Application to Modify and Continue to Operate Arrowhead Landfill, a Municipal Solid Waste Facility (Solid Waste Facility Permit #53-03). Signatories include Uniontown, Alabama community residents who are directly impacted by the operation of Arrowhead Landfill and other individuals ("Complainants") who together filed a complaint with the Office of Civil Rights ("OCR") at the U.S. Environmental Protection Agency ("EPA") alleging that the Alabama Department of Environmental Management ("ADEM") violated Title VI of the Civil Rights Act of 1964 ("Title VI"), 42 U.S.C. § 2000d *et seq.*, and EPA implementing regulations, 40 C.F.R. pt. 7, by reissuing and modifying the Solid Waste Facility Permit for Arrowhead Landfill without assessing whether the permit would have a disparate impact on the basis of race and which, in fact, had the effect of disproportionately and adversely affecting African American residents in

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the community. *See* Title VI Civil Rights Complaint and Petition for Relief or Sanction, EPA OCR File No. 01R-12-R4 (May 30, 2013) (“Civil Rights Complaint”), attached hereto as Ex. 1.¹

Signatories urge ADEM to reject the application for renewal and continued operation for multiple reasons. First, ADEM has failed to incorporate disproportionate impact analyses into its permitting process regarding Arrowhead Landfill and other facilities to ensure compliance with federal civil rights law. Moreover, the operation of the Landfill has an unjustified disparate impact on the basis of race in violation of Title VI and EPA regulations, and Green Group Holdings (“GGH”), the owner of Arrowhead Landfill, has engaged in acts of retaliation and intimidation that are also prohibited by federal law.

As the following comments outline, the proposed permit also has significant deficiencies that violate critical provisions of Alabama’s regulations governing municipal solid waste landfills. PCA’s proposal is not in compliance with requirements of the Alabama Code pertaining to hydrogeologic characterization of the landfill, groundwater monitoring, financial assistance, and stormwater management, and the proposed permit raises a host of questions about each of these issues.

The choice before ADEM, whether to grant PCA’s permit renewal or to deny and revoke the Arrowhead Landfill permit, is a decision of crucial and life-changing importance to the people of Uniontown. At this pivotal moment, coal-fired power plants across the nation are poised to close enormous impoundments of toxic waste. The hazardous substance in these impoundments is coal ash, which contains many of the most dangerous chemicals known to man, including arsenic, lead, hexavalent chromium, mercury, and radium. Coal ash wreaks havoc on human health and the environment when it is released to air and water. Soon coal plants will be emptying massive repositories of this toxic waste and transporting the coal ash off-site for disposal. PCA’s current permit allows acceptance of this toxic ash from 33 states at a rate of up to 15,000 tons a day. As the nation’s power plants close their toxic waste ponds, they may indeed intend to dispose their coal ash in Uniontown, Alabama.

¹ Signatories include:

Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP) and other complainants in EPA OCR Case No. 12R-13-R4, filed with the Office of Civil Rights pursuant to Title VI of the Civil Rights Act of 1964 and EPA implementing regulations on May 30, 2013.

Uniontown is no stranger to coal ash. As described in these comments, the residents of Uniontown suffered severe health and economic hardship when PCA accepted more than 4 million tons of coal ash for disposal in Arrowhead Landfill between 2009 and 2010. Uniontown is a poor choice. Given ADEM's civil rights obligations as well as its mandate under the Solid Wastes and Recyclable Materials Management Act to protect public health and the environment, *see* Ala. Code §§ 22-27-1 to 22-27-27, the location of Arrowhead Landfill, in the heart of an extremely low-income African American community, the history of the facility, which includes the receipt of 4 million tons of coal ash from the Kingston, Tennessee disaster, the failure to adequately protect community members from the effects of coal ash, the failure to complete a hydrogeological examination of the site to determine potential impacts to water resources, the risks posed by the applicant's financial instability as evidenced by the 2010 bankruptcy of Perry County Associates, deficiencies in the permit application, the pattern and practice of deception by GGH, the landfill owners, and, most recently strong-arm tactics to silence critics in the community, ADEM must deny the application to modify and continue the permit and suspend the landfill's operating permit.

These comments discuss these grounds for revoking the permit.

I. ADEM MUST REJECT THE PERMIT APPLICATION BECAUSE APPROVING THE PERMIT WITHOUT CONDUCTING A DISPROPORTIONATE IMPACT ANALYSIS IS CONTRARY TO LAW AND THE OPERATIONS OF THE LANDFILL VIOLATE TITLE VI OF THE CIVIL RIGHTS ACT OF 1964 AND ITS REGULATIONS.

A. Title VI Requires that ADEM Evaluate Whether the Permit Will Have an Unjustified Disparate Impact.

Title VI of the Civil Rights Act of 1964 prohibits discrimination by federally assisted programs such as ADEM's municipal solid waste permitting program on the ground of race, color, or national origin. *See* 42 U.S.C. § 2000d. EPA's implementing regulations make clear that recipients of funding are prohibited from both intentional discrimination and, also, actions and methods of administration with an unjustified disparate impact on the basis of race, color and national origin. 40 C.F.R. § 7.35(b) ("A recipient shall not use criteria or methods of administering its program or activity which have the effect of subjecting individuals to discrimination . . . or have the effect of defeating or substantially impairing accomplishment of objectives of the program with respect to individuals of a particular race . . ."). A violation of Title VI and its regulations is established when, as in the process for reviewing the application for modification and renewal of the permit for Arrowhead Landfill, a recipient fails to consider the disparate impact of a facility's operation on the basis of race, color or national origin as part

of a decision to permit. *S. Camden Citizens in Action v. N.J. Dep't of Env'tl. Prot.*, 145 F. Supp. 2d 446, 481 (D.N.J. 2001), *modified*, 145 F. Supp. 2d 505 (D.N.J. 2001), *rev'd sub nom. on other grounds*, 274 F.3d 771 (3d Cir. 2001) (granting plaintiff's request for declaratory judgment on this basis); *see also* Letter from Peter M. Rogoff, Adm'r, Fed. Transit Admin., to Steve Heminger, Exec. Dir., Metro. Transp. Comm'n & Dorothy Dugger, Gen. Mgr., S.F. Bay Area Rapid Transit Dist. at 2 (Jan. 15, 2010), *available at* <https://oaklandliving.files.wordpress.com/2010/01/fta-letter-to-mtc-and-bart-on-oakland-airport-connector.pdf> (preliminary results of compliance review revealed failure to conduct equity analysis, putting agency in danger of losing federal funds).

As a recipient of federal funds, ADEM must take steps to ensure that the decision to permit Arrowhead Landfill does not have an unjustified disparate impact on the basis of race or national origin. To date, to the knowledge of signatories, ADEM has neither requested that PCA submit such an analysis nor conducted its own disproportionality study. ADEM must conduct this analysis prior to making a decision about the permit application, a requirement that is all the more necessary given that ADEM is currently the subject of an outstanding civil rights investigation into whether ADEM previously violated Title VI by failing to conduct such an analysis and, also, whether the permit for the operation of Arrowhead Landfill modified and reissued in 2011 and 2012 in fact had an unjustified disparate impact on the basis of race. Civil Rights Complaint; Letter from Vicki Simons, Acting Dir., EPA OCR, to David Ludder, EPA File No. 12R-13-R4 (June 27, 2013) (formally accepting the Civil Rights Complaint for investigation).

OCR has already specifically cautioned ADEM that its "failure to adequately consider socioeconomic impacts (including race) at any point in the siting and permitting process for municipal solid waste landfills in Alabama" created a "significant potential" for failing to comply with Title VI. Letter from Karen D. Higginbotham, Dir., OCR EPA, to Luke Cole, Ctr. on Race, Poverty & the Env't & James W. Warr, Dir., ADEM at 80, EPA File No. 28R-99-R4 (July 1, 2003) ("Yerkwood Letter"), *available at* https://www.documentcloud.org/documents/2162712-epa_28r-99-r4.html. OCR stated, "this potential failure of consideration could lead, in the future, to ADEM-permitted landfills that have an adverse disparate impact on a population protected by EPA's Part 7 regulations." *Id.* Over time, complainants and representatives of other disproportionately affected communities in Alabama have appealed to ADEM to put systems, policies, and practices in place to collect demographic data, evaluate exposures, and analyze disproportionate impacts on the basis of race, color and national origin but thus far ADEM has refused. *See, e.g.,* ADEM Reform Coal., Environmental Justice for All Alabama Citizens (Apr. 11, 2014) (presented to Ala. Env'tl. Mgmt. Comm'n), attached hereto as Ex. 2. ADEM's continued failure to take the steps needed to ensure compliance with Title VI is unacceptable and cannot be defended as in some way limited by its authority under Alabama

law. As OCR concluded in 2003, there is nothing in Alabama's solid waste law or implementing regulation that prohibits or limits ADEM's authority to consider safety and socio-economic impacts from landfill siting and to undertake independent analyses of such impacts during the state permitting process if necessary. See Yerkwood Letter at 92. To the contrary, Alabama law, "whose 'terms and obligations . . . shall be liberally construed to achieve remedies intended' gives ADEM broad authority to manage and regulate *all aspects* of solid waste disposal in Alabama." *Id.* (emphasis in original).

As a recipient of federal funds, ADEM must ensure that its permitting program does not unlawfully discriminate in violation of federal law. Effective January 23, 2013, EPA has required that grant recipients, including ADEM, acknowledge the following grant condition:

In accepting this assistance agreement, the recipient acknowledges it has an affirmative obligation to implement effective Title VI compliance programs and ensure that its actions do not involve discriminatory treatment and do not have discriminatory effects even when facially neutral. The recipient must be prepared to demonstrate to EPA that such compliance programs exist and are being implemented or to otherwise demonstrate how it is meeting its Title VI obligations.

EPA General Terms and Conditions Effective October 3, 2016, § 26.c.iii ("EPA General Terms and Conditions"), available at https://www.epa.gov/sites/production/files/2016-09/documents/epa_general_terms_and_conditions_effective_october_3_2016.pdf (emphasis added). Conducting a disproportionality analysis is prerequisite to ensuring compliance with Title VI.

B. The Operation of Arrowhead Landfill Has an Unjustified Disparate Impact on the Basis of Race in Violation of Title VI.

Under Title VI and EPA regulations, "[n]o person shall be . . . subjected to discrimination under any program or activity receiving EPA assistance on the basis of race" 40 C.F.R. § 7.30. Disparate impact discrimination occurs when "a facially neutral policy is causally related to an adverse disparate impact [based on] race, color, or national origin." *S. Camden Citizens in Action*, 145 F. Supp. 2d at 484; see also *The Comm. Concerning Cmty. Improvement v. City of Modesto*, 583 F.3d 690, 711 (9th Cir. 2009); EPA, Interim Guidance for Investigating Title VI Administrative Complaints Challenging Permits at 2 (Feb. 5, 1998), available at <http://www.enviro-lawyer.com/InterimGuidance.pdf>; Draft Title VI Guidance for EPA Assistance Recipients & Draft Revised Guidance for Investigating Title VI Administrative Complaints, 65 Fed. Reg. 39,650 (June 27, 2000) ("Draft Guidance"). "Facially-neutral policies or practices that result in discriminatory effects violate EPA's Title VI regulations unless it is shown that they are justified and that there is no less discriminatory alternative." Interim Guidance at 2.

As discussed below in Section II, the operation of Arrowhead Landfill has caused significant adverse impacts on residents living in proximity to the site. These include air pollution, odor, diminution of quality of life, risks to surface and ground water, and reduced property value. Moreover, provisions in the current application not only provide insufficient assurance against continued adverse impacts but also raise additional questions about potential risks to the health and welfare of the community. See U.S. Comm’n on Civil Rights, Environmental Justice: Examining the Environmental Protection Agency’s Compliance and Enforcement of Title VI and Executive Order 12,898, at 91 (2016) (“Uniontown, Alabama has been adversely affected by the storage of coal ash in its community at the Arrowhead Landfill”) (“2016 Commission Report”); *see also infra* at Section II.

There can be no question that these adverse impacts fall disproportionately on African Americans. See, e.g., Civil Rights Complaint at 23–25. Impacted census blocks are 87-100 percent African American, as compared to a service area for the Landfill of thirty-three states, the population of which is predominantly white. *Id.*

The application provides no analysis of the disparate impact, justification, or discussion of less discriminatory alternatives and must be rejected.

C. GGH, the Owner of Arrowhead Landfill, Has Engaged in Acts of Retaliation and Intimidation, Which Are Prohibited by Title VI and EPA Regulations.

Title VI and EPA regulations establish that ADEM cannot engage in prohibited activities “directly or through contractual, licensing or other arrangements . . .” 40 C.F.R. § 7.35(a) (emphasis added), and, as stated above, ADEM has “an affirmative obligation to implement effective Title VI compliance programs.” EPA General Terms and Conditions § 26.c.iii. Indeed, it is unlawful for Arrowhead Landfill to “intimidate, threaten, coerce, or discriminate against any individual or group” for opposing discriminatory conduct or participating in a Title VI process. 40 C.F.R. § 7.100 (prohibiting retaliation and intimidation in the context of Title VI by applicants and recipients of federal funds and any “other person”). To ensure compliance with these requirements, ADEM must take steps to ensure that permittees, such as the owners and operators of Arrowhead Landfill, do not interfere with the exercise of rights under Title VI and its regulations. Reissuing a Municipal Solid Waste Landfill permit to PCA is inconsistent with these obligations.

Permitting Alabama’s largest municipal solid waste facility in Uniontown, a very low-income predominantly African American community, raises significant red flags. The application seeks continued permission to accept waste from 33 states, including not only nonhazardous solid wastes, noninfectious putrescible and nonputrescible wastes, but also coal

combustion residuals (“CCR” or “coal ash”), on approval by ADEM. The undeniable civil rights issues are all the more in conflict with civil rights law where, as here, they are accompanied by threats and acts of intimidation and retaliation. On March 25, 2016, Complainants in the Civil Rights Complaint wrote to notify ADEM of intimidation, threats, and coercion by the owners and operator of Arrowhead Landfill that were directed at complainants. Letter from Matthew R. Baca & Marianne Engelman Lado, Earthjustice, to Lance LeFleur, Dir., ADEM (March 25, 2016). At the time, GGH was threatening legal action against four of the Complainants for raising concerns about the impacts of the Landfill. The Letter also discussed the Landfill’s activities in New Hope Church Cemetery, a historic African American cemetery adjacent to the Landfill. *Id.* at 1–2. Although ADEM previously declined to take action to address attempts to intimidate Complainants on the ground that activities related to allegations of defamation were a “private dispute” and concerns about New Hope Church Cemetery were “outside the purview of this ADEM permit,” *see* Letter from Lance R. LeFluer [sic], Dir., ADEM, to Matthew R. Boca [sic] & Marianne Engelman Lado, Earthjustice (April 8, 2016), the undersigned respectfully disagree. ADEM’s permitting program must comply with the mandates of Title VI and its regulations and, further, the siting of a facility on or in proximity to a sacred site is relevant to siting conditions. ADEM must take both into consideration in permitting.

On November 19, 2015, Michael D. Smith of Smith & Staggs, the firm representing GGH, sent a letter to four of the Complainants, who at the time served as officers of Black Belt Citizens Fighting for Health and Justice (“Black Belt Citizens”), threatening suit for posting critical commentary about Arrowhead Landfill on its Facebook page and website. *See* Letter from Michael D. Smith, Smith & Staggs, LLP, to Mary Schaeffer et al., Black Belt Citizens Fighting for Health & Justice (Nov. 19, 2015), attached hereto as Ex. 3.² At the time, Complainants had representation on the civil rights complaint but no defense counsel or counsel on retainer. On March 10, 2016, Mr. Smith again threatened the four Complainants with litigation, demanding that they “**immediately delete**” particular posts and “**affirmatively state**” on Facebook “that they have been deleted and that the references to Green Group Holdings and Arrowhead Landfill in all deleted posts were false and misleading.” Letter from Michael D. Smith, Smith & Staggs, LLP to [Ex. 6 Personal Privacy (PP)] Black Belt Citizens Fighting for Health & Justice (Mar. 10, 2016) (emphasis in original), attached hereto as Ex. 4. On March 15, Complainant [Ex. 6 Personal Privacy (PP)] [Ex. 6 Personal Privacy (PP)] informed Mr. Smith that she and [Ex. 6 Personal Privacy (PP)] were consulting with attorneys regarding

² This was apparently not the first time that GGH engaged in intimidation. During a deposition concerning a contested case for a proposed landfill in Texas, Ernest Kaufmann, then-Chief Executive Officer of GGH, stated that in “most of the projects I’ve done, we always end up putting someone in prison, and that probably won’t be the exception here.” Deposition of Ernest Carl Kaufmann II, *City of Hempstead, Tex. v. Waller Cnty., Tex.*, No. 13-03-21872 (Waller Cnty. Dist. Ct. Sept. 27, 2013), attached hereto as Ex. 41.

the request. See Email from [Ex. 6 Personal Privacy (PP)] to Michael Smith (Mar. 15, 2016, 04:22 PM), attached hereto as Ex. 5. Apparently believing that GGH could bully community members into submission, on March 17th Mr. Smith emailed [Ex. 6 Personal Privacy (PP)], pressuring her “to reach at least an agreement in principle” by the following day. Email from Michael D. Smith, Smith & Staggs, LLP, to [Ex. 6 Personal Privacy (PP)] (Mar. 17, 2016, 02:17 PM), attached hereto as Ex. 6. In an abundance of caution, some postings were removed from the Facebook page. Then, after additional emailing, Mr. Smith continued his direct exchange with [Ex. 6 Personal Privacy (PP)] suggesting that they might be subject to punitive damages and demanding that they “disclose the identity and contact information for the person or persons” responsible for posts on the Facebook page, and, in the alternative, “the names and contact information for all persons having authority to post to your Facebook account” Letter from Michael D. Smith, Smith & Staggs, LLP, to [Ex. 6 Personal Privacy (PP)] Black Belt Citizens Fighting for Health & Justice at 1–2 (Mar. 16, 2016), attached hereto as Ex. 7 (emphasis in original). On March 25 2016, William M. Dawson, now representing the four Complainants, sent Mr. Smith a response on their behalf, explaining that some matters had been removed from the Facebook page “as a showing of good faith” and noting, “[the four Complainants] are hardly ideal targets for a damage action, and the inference can be made that any litigation would have other purposes.” Letter from William M. Dawson, Dawson Law, LLC, to Michael D. Smith, Smith & Staggs, LLC (Mar. 25, 2016), attached hereto as Ex. 8. In response, Mr. Smith sent a draft Retraction, Press Release and Settlement Agreement and asked that the four Complainants respond within two days. See Letter from Michael D. Smith, Smith & Staggs, LLP, to William M. Dawson, Dawson Law, LLC (Mar. 30, 2016), with attachments *Draft Press Release and Retraction* and *General Release and Settlement Agreement*, attached hereto as Ex. 9. The Draft Press Release and Retraction included text for the four Complainants to sign stating that they acted “recklessly,” that they knew claims appearing on the Facebook page of Black Belt Citizens were false, and that “Green Group has been an excellent corporate citizen since purchasing the landfill in December of 2011,” among other things. *Id.* (General Release and Settlement Agreement at ¶ 1); *id.* (Press Release and Retraction at 1).

The 11-page General Release and Settlement Agreement included, among other things, a provision requiring the four Complainants to “withdraw as a party from the Title VI claim filed against ADEM in connection with the renewal and modification of Permit 53-03 relating to Arrowhead Landfill, now pending before EPA’s Office of Civil Rights”. *Id.* (General Release and Settlement Agreement at ¶ 3). This General Release and Settlement Agreement was explicitly, by its terms, an effort by GGH to interfere with the exercise of rights under Title VI, EPA regulations, and the First Amendment.

GGH and Howling Coyote, a wholly owned subsidiary of GGH, then brought suit on April 5, 2016 against the four Complainants alleging that various statements on the website and Facebook page of Black Belt Citizens and spoken during radio interviews were defamatory. See Complaint, *Green Grp. Holdings v. [Ex. 6 Personal Privacy (PP)]* No. 2:16-cv-00145 (S.D. Ala. Apr. 6, 2016), attached hereto as Ex. 10. GGH sought millions of dollars in both compensatory and punitive damages. See *id.* at 14. Fortunately, *pro bono* counsel stepped forward to represent the four Complainants and on June 2, 2016, filed a Motion to Dismiss Pursuant to Rule 12(b)(6). See Memorandum in Support of Defendants' Motion to Dismiss Pursuant to Rule 12(b)(6), *Green Grp. Holdings* (June 2, 2016), attached hereto as Ex. 11. As the Memorandum in Support of Defendants' Motion to Dismiss states, Complainants assertions were well-founded and not actionable for multiple overlapping reasons under state and federal law; indeed, they fell "far short of the standard for defamation." *Id.* at 28. The motion to dismiss is pending before the U.S. District Court in the Southern District of Alabama. Although Alabama law does not prohibit strategic lawsuits against public participation, commonly known as SLAPP suits, this litigation is nonetheless intended to silence, censor and intimidate Complainants by burdening them with a lawsuit and threatening them with damages that they cannot afford.

New Hope Church Cemetery, a historic black cemetery dating back to the time of segregation, sits adjacent to Arrowhead Landfill along County Road 1. Notably, Uniontown residents have raised concerns about the impact of the Landfill on New Hope Church Cemetery since initial plans for Arrowhead Landfill. See *Application for Permit Renewal, Arrowhead Landfill, Landfill Permit No. 53-03; Hearing Before the Ala. Dep't of Env'tl. Mgmt.* at 14–15 (July 14, 2011) ("2011 ADEM Public Hearing") (testimony of [Ex. 6 Personal Privacy (PP)] member, Black Belt Citizens, Uniontown Cares & Concerned Citizens of Perry County), attached hereto as Ex. 12. The preservation of historic and sacred space is relevant to state siting criteria concerning an archeological or historically sensitive area. See Ala. Admin. Code r. 335-13-4.01(1)(e) ("Landfill units shall not be located on a site that is archaeologically or historically sensitive as determined by the Alabama Historical Commission"). The Archaeological Survey and Cultural Resource Evaluation of a Proposed Landfill prepared for PCA in 2001 recommended "avoidance" of graves associated with New Hope Cemetery, as well as a buffer zone around the area. Environmental Resource Analysts, Inc., Archaeological Survey and Cultural Resource Evaluation of a Proposed Landfill in Perry County, Alabama Near Uniontown at 21 (2001), in Hodges, Harbin, Newberry & Trimble, Inc., 2016 Solid Waste Permit Renewal Application ("Permit Application") at Vol. 2, app. F.

Over time, the operation of the Landfill and actions taken by the Landfill have interfered with the use of this sacred space. Among other things, the Landfill sited one or more monitoring wells on Cemetery grounds. See Photograph: Arrowhead Landfill Monitoring Well

on Cemetery Grounds, taken by [Ex. 6 Personal Privacy (PP)] (2014), attached hereto as Ex. 13. Uniontown resident [Ex. 6 Personal Privacy (PP)] whose brother and great grandparents are buried in the Cemetery, understood that the owners and operators of the Landfill had promised to maintain the grounds and ensure access but found that they had, instead, neglected the site. [Ex. 6 Personal Privacy (PP)]

[Ex. 6 Personal Privacy (PP)] Statement Submitted to the U.S. Commission on Civil Rights, at 10 (Jan. 22, 2015), attached hereto as Ex. 14. On some days, the smell from the Landfill is overpowering. *Id.* Ernest Kaufman, CEO of GGH, has explicitly stated that the Cemetery is on land the company does not own or control, see Letter from Ernest Kaufmann, President & CEO, Green Group Holdings, LLC, to Black Belt Citizens Fighting for Health & Justice at 1 (June 22, 2015), attached hereto as Ex. 15. However, in 2015, with the Complaint to OCR pending, GGH unilaterally brought heavy equipment onto the grounds of the Cemetery and began to modify the site. *See* Photographs: Heavy Equipment on New Hope Church Cemetery Grounds, taken by [Ex. 6 Personal Privacy (PP)] (Mar. 4, 2016), attached hereto as Exs. 16–17; Statement of [Ex. 6 Personal Privacy (PP)], Ex. 13 at 10. Even as members of the community complained, the Landfill continued its activities at the Cemetery, cutting a wide swath through the brambles with heavy machinery and taking other liberties with markers and on or around unmarked graves. In response to the outcry, GGH conducted a community meeting – with Mr. Smith present as counsel for GGH and community members without legal representation. *See* Letter from Michael D. Smith, Smith & Staggs, LLP, to [Ex. 6 Personal Privacy (PP)] at 1 (Nov. 18, 2015) (referring to the “community meeting”), attached hereto as Ex. 18. GGH attempted to quell controversy by offering to create a non-profit cemetery foundation composed of its allies in the community, purportedly to determine future control over the Cemetery. GGH further attempted to coerce community members, who at that point were still not represented by counsel, to agree to its plans and objectives for the Cemetery. When Complainant [Ex. 6 Personal Privacy (PP)] was not placated by GGH’s presentation, Mr. Smith sent her a dismissive letter accusing her of “serving the agendas of strangers from outside Perry County,” *id.*, a tactic reminiscent of the claim of opponents during the height of the Civil Rights Movement that protesters were fronting for “outside agitators.” *See generally* Keith M. Finley, Southern Opposition to Civil Rights in the United States Senate: A Tactical and Ideological Analysis, 1938-1965, at 63, 243, 275 (Aug. 2003) (unpublished Ph.D. dissertation, La. St. Univ.), available at http://etd.lsu.edu/docs/available/etd-0702103-151627/unrestricted/Finley_dis.pdf. GGH persisted in its activities in the Cemetery over the objections of community members and in late June, Complainants observed GGH utilizing heavy equipment to install a large wire fence on wood support posts at the Cemetery. *See* Photographs: Cleared Entrance to Cemetery with New Fence and [Ex. 6 Personal Privacy (PP)] Standing Where She Believes Her Family Members May be Buried, taken by [Ex. 6 Personal Privacy (PP)] (July 12, 2016), attached hereto as Exs. 19–20. GGH’s actions constitute both a form of intimidation in

the community and, also, interference with a historic and sacred space. Neither should be sanctioned by continuation of the permit.

II. ADEM MUST REVOKE THE PERMIT AND PROHIBIT THE DISPOSAL OF COAL ASH IN THE ARROWHEAD LANDFILL BASED ON THE IMPACT OF THE LANDFILL ON THE HEALTH AND WELFARE OF UNIONTOWN RESIDENTS

One of the legislative purposes of Alabama's Solid Waste Management Plan is "to protect the public health and the state's environmental quality", and, to achieve its purposes, the law provides that "[t]he terms and obligations of this article shall be liberally construed to achieve remedies intended." Ala. Code § 22-27-41. The legislature's findings include that the state must properly manage wastes "to reduce the likelihood of both short-term and long-term threat to human health and the environment . . ." *Id.* § 22-27-40(2). The legislature has further found that "[p]roper planning for solid waste management must include the evaluation of facility sites based on a broad group of factors including, but not limited to, environmental conditions, local needs for waste management, social and economic impacts on the host community, the availability and impact on public services, and the consistency of a proposed facility with any final solid waste management plan[.]" *Id.* § 22-27-40(5); *see also* Ala. Admin. Code r. 335-13-4-.01 (landfill unit siting standards are intended "to prevent adverse effects on health or the environment"). In light of the actual and potential impacts of Arrowhead Landfill on the Uniontown community, reissuing the permit would be inconsistent with the legislative purpose and siting factors.

D. The Uniontown Community Has Suffered Injuries to Health and Their Environment from Prior Disposal of Coal Ash.

People living near the Landfill have endured numerous harms. Many of these, such as odor and gas emissions causing adverse health effects, particulate pollution, diminution of quality of life, and reduced property values are more apparently attributed to the Landfill. Others, such as surface water impacts have been verified as likely stemming from the Landfill by an independent scientist, Ex. 6 Personal Privacy (PP) (who recommends further testing to confirm her preliminary results), and conform to the anecdotal evidence members of the community have described for years. *See infra* at Sections II.A.5 & IV.

For years, residents of this low-income and predominantly African American community have endured risks and injuries to their health and environment associated with the disposal of coal ash at the Arrowhead Landfill. *See* 2016 Commission Report at 91 (finding adverse effects on Uniontown community from the disposal of coal ash). As demonstrated in the 2013 complaint filed with the OCR, residents have experienced (1) frequent emission of offensive

gas, particulates and odors that affect appetite and sleep, irritate the eyes and upper respiratory tract, cause headaches, dizziness, nausea and vomiting, and interfere with outdoor activities and the enjoyment of one's property; (2) increased populations of flies in and around their homes that are bothersome and that may be carriers of dozens of infectious viruses, bacteria, and parasites; (3) increased populations of birds around their homes that deposit droppings and that may be carriers of dozens of infectious viruses, bacteria, and parasites; (4) increased noise from operation of heavy machinery (*e.g.*, steel wheel compactor, bulldozers, excavators, off-road haul trucks, small farm tractors, clamshell buckets, railcars) 24-hours per day, 7-days per week causing headaches and interference with sleep, study, conversations, television and radio listening and other activities in and around their homes; and (5) the frequent emission of fugitive dust from the landfill that causes particulate deposition on personal and real property, including homes, porches, vehicles, laundry, and plantings. (*See* Civil Rights Complaint, Ex. 1 at 12–13 (citations omitted)).

For all these reasons, there can be no escaping the on-the-ground reality that Complainants and other community members face every day: this Landfill harms people in and around the community.

1. Odor and Gas Emissions

The odor from the Landfill is pervasive for nearby residents. It is an acrid, sometimes putrid odor that is hard or impossible to escape. Residents report that the odor burns your eyes, makes you dizzy, causes stomach pains, nausea and vomiting, and can take your breath away; the odor is worse some times than at others, such as after rain or in the morning or when it is cloudy. Residents have been reporting these adverse effects for years. ADEM 2011 Public Hearing, Ex. 12 at 6, 8, 15, 17-32, 35, 37-41, 43, 44, 49, 51–53, 56–61, 63, 66, 69, 71–78, 80, 83, 85–107; ADEM, Collected Record of Complaints filed between 2012–2013 (“2012–13 Written Complaints”) at 2-32, 35-44, 49-53, 56-59, 61-63, 66-69, 71-78, 80-81, 83-107, attached hereto as Ex. 21; Alan H. Lockwood, Physicians for Social Responsibility & Lisa Evans, Earthjustice, *Ash in Lungs: How Breathing Coal Ash is Hazardous to Your Health* at 11 (2014) (“Ash in Lungs”), attached hereto as Ex. 22,. The smell did not exist before the Landfill was installed. Statement of Esther Calhoun, Ex. 14 at 7.

Hydrogen sulfide, which is often released at coal ash landfills, is known to be a “flammable, colorless gas with the characteristic odor of rotten eggs.” Ex. 22 at 4. Exposure to this odor “may cause nausea and irritation to the eyes, nose or throat” and “may also cause difficulty in breathing” for some. *Id.* “The sulfurous stench from coal ash dumps can also significantly degrade the quality of life of communities near disposal sites.” *Id.*

Residents near the Arrowhead Landfill have described the smell as strong, offensive, awful, terrible. *See, e.g.*, 2012–13 Written Complaints, Ex. 21 at 3–5, 8, 14–32, 37–44, 47, 49–50, 52–53; ADEM 2011 Public Hearing, Ex. 12 at 64, 69. It has caused many people to stay indoors when they used to enjoy much time outside. One resident described an odor so offensive so as to make him “sick to my stomach” while his family was trying to barbecue outside. *Id.* at 53. Another described how on one occasion “[t]he odor was so bad I didn’t know whether to hold my mouth or hold my nose ...” *Id.* at 67. Yet another has reported that because of strong smell, “I can’t sit out on my porch.” 2012–13 Written Complaints, Ex. 21 at 76. Whether at their front doors, in their yards or on their porches, residents have long reported that the smell from the Landfill “burns my eyes,” “makes my eyes and nose water,” “makes me feel nauseated,” and causes dizziness. 2011 ADEM Public Hearing, Ex. 12 at 6, 8, 15, 17–32, 35, 37–41, 43, 49, 51–53, 56–61, 63, 66, 69, 71–78, 80, 83, 85–107.) As one resident described it, “the odor is real strong in my yard and on my porch and in the road. You can’t hardly breathe, it so strong out there.” 2012–13 Written Complaints, Ex. 21 at 16.

For some, staying indoors is not enough to protect against the harmful odor. Resident Ex. 6 Personal Privacy (PP) for example, reported that “the [s]mell comes in the house; I have to put towels over my vents. It really burns my eyes; my eyes are watering all the time.” *Id.* at 35.

It bears repeating that many residents live mere feet from the Landfill, which is now rightly referred to as a “mountain” in town. Statement of Ex. 6 Personal Privacy (PP) Ex. 14 at 1,10. The Landfill’s ever-present odor has greatly injured their lives.

2. Air Emissions and Dust

Residents for years have also experienced adverse health effects from air emissions and dust from the Landfill. At the July 14, 2011 ADEM public hearing on the permit renewal, Mary Schaeffer described how winds “have blown the coal ash into homes and gardens, into agricultural fields and into catfish ponds compromising not only the quality of air, water, and soil; but also, the health of humans and . . . of wildlife including deer, rabbits, and other game and fish that local area residents use to supplement their diets.” 2011 ADEM Public Hearing, Ex. 12 at 23. As resident Ex. 6 Personal Privacy (PP) put it, “I am eating this dust and ash.” *Id.* at 30.

In 2012, Stone Lions Environmental Corporation, a consulting firm specializing in air pollution evaluations related to industrial facilities, conducted an air dispersion modeling study of the atmospheric emissions of a subset of pollutants from the Arrowhead Landfill to quantify

the impact of hydrogen sulfide (“H2S”) and total suspended particulate (“TSP”) matter. ³ Jim Tarr, Stone Lions Env'tl. Corp., An Evaluation of Particulate Matter, Hydrogen [sic] Sulfide, and Non-Methane Organic Compounds from the Arrowhead Landfill (2012), attached hereto as Ex. 23. Based on the study, researchers formed the opinion that “[d]uring 2010, and the previous year, the Arrowhead LF [Landfill] generated a substantial amount of H2S and TSP air emissions during normal operation.” *Id.* at 5.

Findings based on emissions in 2010 demonstrate risks associated with coal ash disposal at the Landfill. ADEM’s decision to reissue the permit to the Landfill failed to provide protection against the reoccurrence of similar harms. The report also concluded:

The report also concluded:

- Those H2S and TSP air emissions resulted in a significant negative impact on the neighborhoods near the [landfill] boundaries.
- The odor threshold of H2S was exceeded during more than one-thousand hours at locations immediately adjacent to the [landfill] during 2010; the odor threshold of H2S was exceeded more than forty hours at every location illustrated on the base map during 2010.
- The original primary ambient air quality standard for TSP (150 micrograms/M3) was exceeded during 2010 at places just south of the [landfill] boundary.
- The apparent widespread neighborhood impact of TSP air emissions from the Arrowhead [Landfill] defined by this air dispersion modeling project is further supported by analytical results of five house dust samples collected near the [landfill] during February 2012.
- Had the Arrowhead [Landfill] operator chosen to employ best available control technology on the haul road and at the [landfill] coal ash disposal area, the toxic chemical impact on the nearby community would have been less detrimental to the health, well being, and property of those who lived nearby. The more obvious impacts included TSP dust problems and frequent noxious odors at many locations around the Arrowhead LF.

Id. at 6 (citations omitted). These harms could and should have been avoided, but were not.

³ A copy of the resume of the author of the study, Jim Tarr, is available at http://www.stonelions.com/JT_resume.pdf.

In addition, though the study did not model organic sulfides (because of data gaps), the report cautioned that it “should not be assumed . . . that organic sulfide air emissions from the [landfill] did not have a significant negative impact on the nearby community.” *Id.* at 5. The 2012 Stone Lions study, which included analysis of dust samples, demonstrates some of the impacts and risks associated with the reissuance of the permit for Arrowhead Landfill that ADEM must investigate in full.

By the smell alone—an acrid, chemical smell—it is clear to anyone who has visited the Landfill that air emissions are present. [Ex. 6 Personal Privacy (PP)] described the air quality in his yard as so bad that “it makes it difficult to breathe.” 2012–13 Written Complaints, Ex. 21 at 107; *see also id.* at 16. These emissions endanger the health of nearby residents. “When suspended in the air as dust, coal ash is a serious health hazard.” *Ash in Lungs*, Ex. 22 at at 3. Fugitive dust is “made up of airborne coal ash filled with dangerous and toxic pollutants.” *Id.* at 1. “The inhalation of toxic dust from disposal, transport and plant operations can cause serious injuries to workers and communities residing near coal ash dumps.” *Id.* at 3.

Residents have also seen coal ash dust spill on or near the tracks on which the rail cars filled with coal ash are transported, and otherwise “kick[] up into the air, continuing to pollute” the air. Statement of [Ex. 6 Personal Privacy (PP)], Ex. 14 at at 5. The coal ash dust “continues to get onto our cars and into our homes.” *Id.* Dust has blanketed homes, cars and gardens. *See Ash in Lungs*, Ex. 22 at 11. For some, dust from the Landfill has collected inside their houses, drawn inside in summer months by window air conditioning units, resulting in the need for frequent cleaning. 2011 ADEM Public Hearing, Ex. 12 at 45, 48, 54. As one resident put it, coal ash dust landing on his vehicles caused the paint to start “changing colors.” If the dust changes the paint color on your car or vehicle, he asked, “what do you think it do to your lungs?” *Id.* at 34.

3. Respiratory Illness, Neuropathy, Nose Bleeds, Eye Problems, and Other Adverse Health Effects

Exposure to dust and odors from the Arrowhead Landfill has “caused residents of Uniontown to experience health problems, including respiratory illness, headaches, dizziness, nausea and vomiting.” *Ash in Lungs*, Ex. 22 at 11. Many residents have been affected, attributing numerous “health problems that they didn’t have before” to the bad air quality that they have reason to believe results from the Landfill. Statement of [Ex. 6 Personal Privacy (PP)], Ex. 14 at 8. Several residents have already developed neuropathy. *Id.* at 9.

One of the most difficult experiences for residents near the Landfill to endure has been observing health problems suffered by their children, grandchildren, and other children they care for in the community. Since the Landfill’s arrival, children have reported nose bleeds,

headaches, runny noses, constant colds, and other respiratory problems like asthma. *See id.* at 9.

Significantly, many of these health impacts are consistent with impacts of pollution found in coal that have been documented elsewhere. *See generally* Ash in Lungs, Ex. 22; *see also* 2016 Commission Report at 63–64 (health effects of coal ash).

4. Surface Water

Independent scientist [Ex. 6 Personal Privacy (PP)] has collected preliminary samples of surface water near the Arrowhead Landfill. Declaration of [Ex. 6 Personal Privacy (PP)], attached hereto as Ex. 24. [Ex. 6 Personal Privacy (PP)] repeatedly found high levels of heavy metals, conductivity, arsenic, and other signifiers of coal ash in her water samples. These are preliminary but serious red flags that she believes require ADEM or EPA to conduct further testing. *See infra* at Section IV.C.

5. Drinking Water

Residents have long sounded the alarm over coal ash that was being washed away from the railway box cars transporting the ash and that flowed into Tayloe Creek throughout the time the ash was being shipped to Arrowhead. Residents reported that coal ash was used as cover material, and expressed concern that “[r]ains have washed the uncovered coal ash and its toxins into local creeks and roadside ditches compromising surface water and ultimately jeopardizing well water for households and livestock.” 2011 ADEM Public Hearing, Ex. 12 at 23.

Many residents have stopped using well water. They have resorted to drinking bottled water because of concerns about their water quality since the Landfill arrived, even though this is a major financial burden, particularly for the many residents who are on fixed incomes. *See* Statement of [Ex. 6 Personal Privacy (PP)], Ex. 14 at 9. The danger of contaminated drinking water is among the greatest concerns related to coal ash disposal. *See* Ash in Lungs, Ex. 22 at 1.

6. Increased Risk of Health Impacts

Residents who live near the Arrowhead Landfill expect the adverse health effects they and their children and families have experienced will continue as long as the Landfill remains. Residents may never know for certain whether the health problems they are experiencing are due to the coal ash deposited at the site, the disposal of other waste, or the cumulative impacts of the Landfill and other sources of contamination in Uniontown, such as the cheese plant and problems plaguing the sewage system. *See* Statement of [Ex. 6 Personal Privacy (PP)], Ex. 14 at 1, 3, 11. They attest, however, to the contributions of the Landfill to the higher incidence of respiratory and other illnesses, and some of these conditions are associated with health hazards related to

coal ash, as discussed above. In light of the fact that the Landfill is actively soliciting much more coal ash and is currently permitted to accept as much as 15,0000 tons of coal ash a day (equivalent to 750 truckloads *per day*), the potential for increased adverse health impacts on the community is very high. See Press Release, Green Group Holdings, Arrowhead Landfill Provides Safe Haven for Utilities Disposing of Coal Ash (May 5, 2015), attached hereto as Ex. 25.

Moreover, coal ash is a known significant health hazard that is a carcinogen, contributes to respiratory and cardiac disease, and other health risks. See *generally* Ash in Lungs, Ex. 22 at 1, 3-6, 8; see Ruhl et al., *infra* at n.6 in Section IV.C., at 6331. Residents who have now been exposed to the coal ash from the Landfill for several years will live under these threats their entire lives. Of course, none of this happens in a vacuum—when someone requires medical care from something they attribute to the Landfill they must also travel great distances from Uniontown. Statement of [Ex. 6 Personal Privacy (PP)] Ex. 14 at 12. Many residents in this rural, low-income community continue to face significant barriers to obtaining health care services.

7. Diminution of Quality of Life

The Landfill has also diminished the quality of life of nearby residents in many ways. Beyond the stench, see *supra* Section II.A.1, many residents have given up gardening and eating fruits, vegetables, and pecans from their property. Residents have found they can no longer eat their watermelons or peaches, and that their pecan and pear trees are wilting up. 2011 ADEM Public Hearing, Ex. 12 at 64, 68; see *also* Statement of [Ex. 6 Personal Privacy (PP)] Ex. 14 at 3, 10. Others have had to forgo fishing. One resident who fished in Tayloe Creek stated that when “you catch those fish, they smell. The water smells. The fish smell . . . you can’t eat those fish.” 2011 ADEM Public Hearing, Ex. 12 at 33.

Additionally, as described above, many residents used to enjoy Alabama evenings on their porches or otherwise spend time outside but are now often not able to because of the smell, its adverse effects, and fear about impacts from the Landfill. See Statement of [Ex. 6 Personal Privacy (PP)] [Ex. 6 Personal Privacy (PP)] Ex. 14 at 3.

Likewise, the presence of pests such as rats, buzzards, and flies have plagued nearby residents since the Landfill arrived. See *id.* at 8, 10; 2012–13 Written Complaints, Ex. 21 at 5. These create the additional risk of tracking harmful coal ash dust.

8. Impacts to Heritage and Culture

The Landfill has also harmed the heritage and culture of community residents. For many, the land on which they live has been in their family for generations. *See, e.g.*, Statement of [Ex. 6 Personal Privacy (PP)] Ex. 14 at 2. Residents describe these harms as a tragedy, losing the ability to live and thrive in their own home and property. *See id.* at 3; Ash in Lungs, Ex. 22 at 11

Many people attend church nearby and they breathe in the smell and toxics when they are en route and at church near the Landfill. *See* Statement of [Ex. 6 Personal Privacy (PP)] Ex. 14 at 8, 10. There is also a historic African American cemetery directly adjacent to the Landfill, and residents' ability to pay respects to loved ones have been harmed by the effects of the Landfill. *Id.*; *see supra* Section I.C.

E. The Uniontown Community Is Particularly Vulnerable To The Health Threats Posed By Coal Ash Disposal.

Residents near the Landfill in Uniontown are particularly vulnerable to the health threats posed by coal ash disposal. EPA's EJSCREEN tool data show that residents within a two-mile radius around the active disposal area of Arrowhead Landfill are 98% African American. *See* EPA, EJSCREEN ACS Summary Report at 1 (data accessed Mar. 3, 2016), attached hereto as Ex. 26. The community is 83% low-income, in the 97th percentile of low-income populations in the state. EPA, EJSCREEN Report for 2-Mile Ring Centered at Arrowhead Landfill at 3 (data accessed Mar. 3, 2016), attached hereto as Ex. 27.

Uniontown residents living near the Landfill lack the resources to access adequate health care and cannot afford to move. As [Ex. 6 Personal Privacy (PP)] explained to ADEM, "[w]e don't have money. Everybody is – it's a very poor county for the black county. And we don't have no place to go and no money to move. And we can't sell our place when we want to sell, so we just stuck. Just dying a slow death for no reason just because we're black and poor people." 2011 ADEM Public Hearing, Ex. 12 at 44-45.

The community is also particularly vulnerable to the threats posed by coal ash disposal as a result of the substantial cumulative impacts from other toxic sources. *See* Statement of [Ex. 6 Personal Privacy (PP)] Ex. 14 at 1, 3, 11. The existence of other sources of contamination exacerbate the effects of the Landfill on human health and the welfare of this community. Cumulatively, the various impacts in Uniontown are devastating, as demonstrated by EPA's EJSCREEN tool. That analysis shows that the area immediately surrounding the Landfill is in the 96th percentile statewide for toxic waste disposal facilities. EPA, EJSCREEN, Report, Ex. 27 at 3.

III. ADEM MUST REVOKE THE ARROWHEAD PERMIT AND DENY THE PERMIT RENEWAL BECAUSE PCA PROVIDED ADEM WITH A GROSSLY INACCURATE AND INCOMPLETE HYDROGEOLOGIC STUDY OF THE LANDFILL SITE IN VIOLATION OF ADEM REGULATIONS AT CHAPTER 4, DIVISION 335-13-4.

A. PCA Violated Hydrogeology Standards For Determining Groundwater Elevation As Required By 335-13-4-.11(2) By Failing To Measure Groundwater Elevations.

Groundwater elevation is central to the determination of whether a landfill site is suitable for waste disposal. To that end, ADEM's hydrogeology standards clearly require that the permit applicant accurately characterize the depth of groundwater at the site. ADEM's general design standards for landfill permits require:

For purposes of designing the bottom elevation of the liner system, the applicant shall measure the ground water elevation at the location of the proposed cell or liner system. Such determinations shall be based on groundwater measurements taken in the area of the proposed cell or liner system [T]he applicant shall obtain a minimum of two measurements taken during each of the three consecutive months of February, March, and April

Ala. Admin. Code r. 335-13-4-.11(2)(a). There is no evidence, however, in the 2016 application renewal package that PCA measured the depth to groundwater at the location of the two newly-proposed tracts (2 and 3) that open hundreds of additional acres to waste disposal or at the additional 25 individual cells spread across all three landfill tracts.

B. The Arrowhead Landfill's 2001 Permit Failed To Meet Hydrogeology Standards For Location Of Groundwater Wells As Required By 335-13-4-.13(2)(A).

ADEM's hydrogeological evaluation requirements specify that a new landfill facility must use a minimum of three (3) boring locations to characterize the site's hydrogeology. *See Id.* r. 335-13-4-.13(2)(a)(1). In the hydrogeological evaluation submitted to ADEM in 2001, only one of the eight wells installed and tested in 2001 were placed "*in the area of the proposed cell or liner system...*", and the horizontal distance between comparably-constructed shallow or deep monitoring wells was thousands of feet across an area with significant topography. Three shallow monitoring wells (P-1 through P-3) were installed to depths of 60 feet below land surface (bls) more than a mile apart at the three most distant corners of the 1,100-acre Arrowhead property. Since 2005, the applicant has stopped using the original wells, and instead has relied upon much shallower wells (~23 feet bls) that do not consistently contain groundwater. Since 2001, no additional wells have been constructed to remedy the original deficiency.

C. PCA Failed To Identify The Depth To Groundwater And Evaluate Groundwater Flow Direction For Each Cell Or Landfill Tract.

ADEM's groundwater resources requirements specify that the applicant must identify and evaluate the first occurrence of groundwater-saturated materials below the landfill unit. *See id.* r. 335-13-4-.14(1)(b). Furthermore, Section 335-13-4-.14(1)(a) of ADEM's regulations requires that the applicant establish the depth to groundwater and flow direction. The evaluation must include installation and testing of at least one (1) hydraulically-upgradient monitoring well to establish the naturally-occurring ("background") quality of groundwater, and at least two (2) hydraulically-downgradient wells. *Id.* r. 335-13-4-.14(1)(b)(1). Pursuant to these rules and Ala. Admin. Code r. 335-13-4-.13(2)(a), .27(2), this evaluation should be performed at each cell or landfill, if they are distinct units equipped with separate liners and leachate collection systems. Since PCA proposes separate landfill units for Tracts 2 and 3, the permit should contain such separate and distinct evaluations.

To date, however, PCA has not performed the required hydrogeologic investigation, nor is such work proposed by the owner's 2016 renewal application package. Instead, PCA proposes piecemeal installation of monitoring wells over an undisclosed period of years or decades at locations routinely misrepresented as "hydraulically downgradient." Significantly, *none* of the current or proposed monitoring wells at Arrowhead are placed within *any* existing or proposed landfill tract or cell.

D. The Arrowhead Landfill's Groundwater Monitoring Network Does Not Comply With ADEM Regulations.

In 2001, the owner of the Arrowhead Landfill evaluated the "first occurrence" of groundwater by installing five (5) shallow monitoring wells to approximately 60 feet bls, and groundwater was measured in the wells on several occasions, including approximately 11 to 20 feet bls in 2005 when the initial landfill permit was submitted to ADEM. *See* 2005 Permit Application at tbl. 3 ("Groundwater Levels and Elevations"). The applicant seems to have ignored those wells and the related water-level data after ADEM issued the first permit to operate the landfill. Since 2005, the owner has relied solely upon monitoring wells that are *much* shallower (~23 feet deep) than the original 2001 wells. Significantly, all seven (7) shallow monitoring wells being used in 2016 (GWM-12 through GWM-18) are located at some of the highest elevations (283 to 235 feet above mean sea level (AMSL)) on the Arrowhead property (maximum 290 feet AMSL), and all seven wells are described as hydraulically "downgradient" of landfill cells. *See* Ivan A. Irizarry & Mark S. Preddy, Bunnell-Lammons Eng'g, Inc., Report of Groundwater Quality and Statistical Analysis, First Semi-Annual Sampling Event of 2016, Arrowhead Landfill at 1 & tbl.1 (received by ADEM on May 9, 2016) ("May 2016 Groundwater

Report”). All 12 shallow monitoring wells installed to date (either 23 feet or 60 feet deep) are in upland areas, and *not* where the shallowest groundwater is most likely to be encountered (e.g., lower topographic areas and near ‘jurisdictional streams’ identified at the property).

ADEM’s “Groundwater Monitoring and Corrective Action” regulations require:

A groundwater monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the first saturated zone (as defined in 335-13-1-.03(126)) that:

1. Represent the quality of background groundwater that has not been affected by leakage from a unit. . . . and
2. Represent the quality of groundwater passing the relevant point of compliance [defined as no more than 150 meters (492 feet) from the waste management unit boundary].

Ala. Admin. Code r. 335-13-4-.27(2)(a). Importantly, ADEM regulations require “[t]he downgradient monitoring system must be installed at the relevant point of compliance . . . *that ensures detection of groundwater contamination in the first saturated zone.*” *Id.* (emphasis added). The existing monitoring well network for the unconfined surficial aquifer does not meet these requirements. It is significant that the number, placement, and depth of the existing shallow monitoring wells are inadequate to monitor for landfill-derived contaminants that may be migrating away from Tract 1.

E. Green Group Has Improperly Characterized Groundwater Location And Flow.

Green Group Holdings’ 2016 application package describes occurrences of shallow groundwater that they call “perched” and/or attribute to infiltration due to defective monitoring well construction. The text of the applicant’s semi-annual monitoring reports use boilerplate descriptions of the unconfined water-table aquifer, claiming that “[g]roundwater in these shallow wells is typically a seasonal feature, as these wells are typically dry during periods of low precipitations.” *See, e.g.,* May 2016 Groundwater Report at 1. However, the distribution of water-level measurements from the shallow monitoring wells form a reasonably consistent northward-directed groundwater flow pattern, as shown in the following equipotential map for the March, 2016, water-level data.

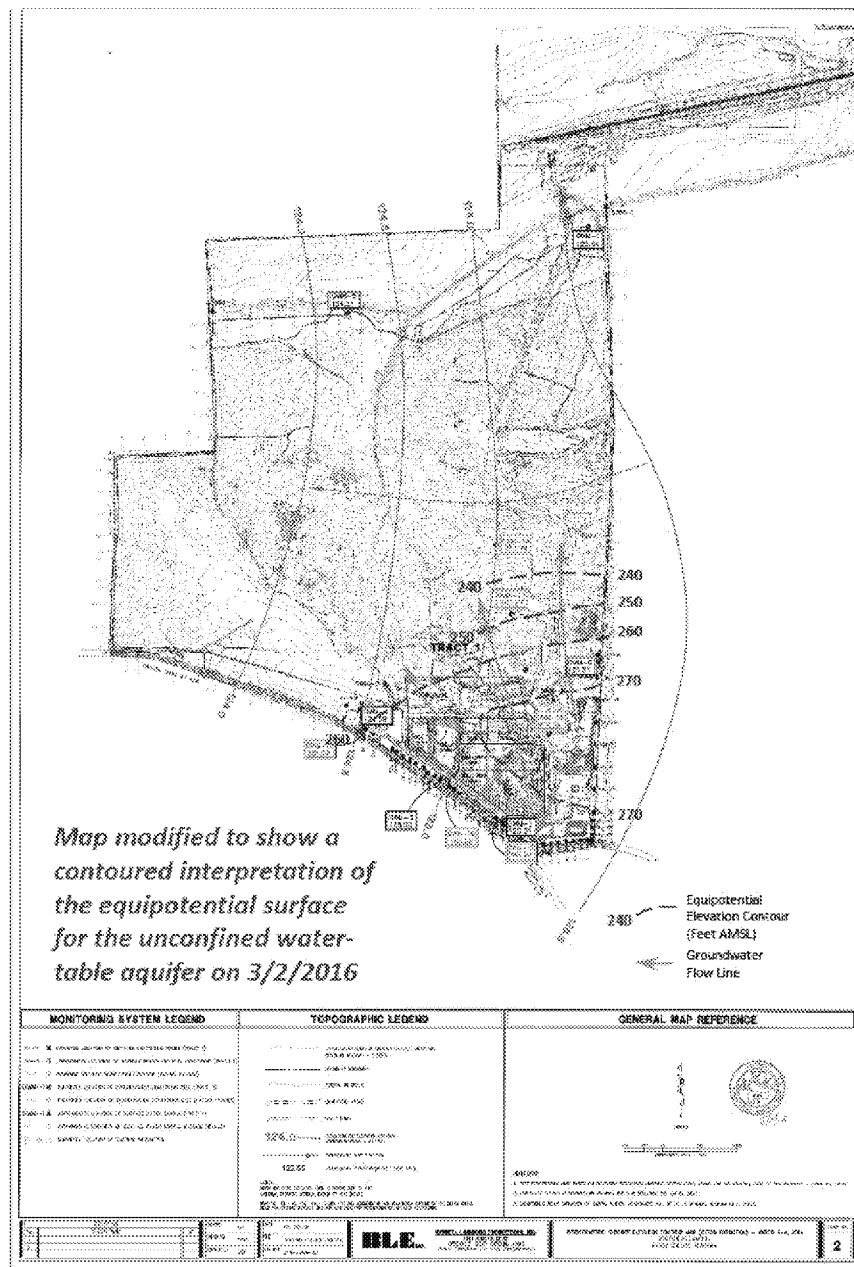


Figure 1: Modified Equipotential Map

The map above demonstrates that PCA's claim that the Selma Group aquifer is "dry" to at least 440 feet below land surface (bls), and locally up to 563 feet bls, is not substantiated. The occasional lack of groundwater in the landfill's few shallow monitoring wells does not indicate the absence of groundwater, but instead reflects PCA's failure to install monitoring wells that are deep enough to consistently establish the depth to the unconfined water table within the Selma Group limestone-marl-clay sequence. This failure is exacerbated by *intentional* placement of all shallow monitoring wells at the highest property elevations in order

to claim that the subsurface is “dry” to at least 440 feet bls except where allegedly “perched” groundwater is present.

Contrary to ADEM’s requirements, PCA has not produced any equipotential maps for the water-table aquifer (Selma Group) to indicate (1) flow direction; (2) groundwater velocity calculations for that unconfined aquifer; or (3) any tabulation of the measured depth to groundwater in the shallow wells (since early 2005). The applicant’s semi-annual monitoring reports do not report the depth to water (Table 1: “Potentiometric Surface Data”), but subtraction of the groundwater elevations from the elevations of the measuring points (top of well casing) indicates that groundwater has been present at less than 5 feet bls on at least one occasion. The shallowest groundwater reported through March of 2016 for the existing seven (7) shallow wells ranges from 4.90 feet bls (well GMW-14 on 3/17/2014) to 14.91 feet bls (well GMW-14 on 3/2/2016), with the average shallowest groundwater at 9.94 feet bls occurring on those two dates.

The sandy Eutaw Formation aquifer is located at least 440 feet bls, and it is hydraulically confined (pressurized). Measurements of hydraulic head in the monitoring wells tapping the Eutaw aquifer have been as shallow as approximately 80 feet bls, which is the basis of the applicant’s claim that there is major separation from the bottom of the landfill and groundwater. However, water-level measurements from those deep monitoring wells do not indicate that groundwater is first encountered at those depths, and groundwater forming the unconfined water table is substantially shallower than the equipotential (pressure head) surface of the Eutaw Formation aquifer. The applicant errs in relying exclusively upon very shallow monitoring wells installed at the highest property elevations to claim that the subsurface is “dry” to at least 440 feet bls, by ignoring historic (2001 and 2005) water-level measurements as shallow as 11 feet bls, and failing to acknowledge much shallower water levels measured in existing shallow monitoring wells as recently as March 2016.⁴

⁴ The permit application also relies on a May 13, 2003 letter from the Army Corps of Engineers regarding whether the Landfill is designed to avoid all jurisdictional waters including wetlands, which is a factor in ADEM siting criteria. See Ala. Admin. Code r. 335-13-4-01; Letter from Ronald A. Krizman, Chief, Regulatory Branch, U.S. Army Corps of Engineers, to Ecological Solutions (May 13, 2003), in Jordan, Jones & Goulding, Inc., Solid Waste Permit Application Prepared for Perry County Associates, Vol. 1, Site Analysis, Perry County Associates Landfill (2005) (“2005 Permit Application”) at app. 4. The jurisdictional determination was valid for a period of 5 years from the date of the letter and, unless specifically revalidated by the Army Corps of Engineers, automatically expired. *Id.* at 1. Prior to any action to renew, this determination by the Army Corp should be re-validated in light of new information concerning groundwater and the landfill expansion. Furthermore, the design criteria in Alabama’s Solid Waste regulations prohibit the Landfill from being located in wetlands and require compliance with the Clean Water Action. Ala. Admin. Code r. 335-13-4-.01(2)–(3). ADEM has the responsibility to independently ensure compliance with these sections as well as confirm the Corps’ concurrence.

F. PCA's Permit Application Ignores The Hydrologic Features Of The Site, Including The Perennially Flowing Tayloe Creek, Which Indicate That There Is Shallow Groundwater Discharging To The Stream.

Streams that flow most or all of the time are sustained by shallow groundwater discharging through the stream channel. If there was no shallow groundwater in the hundreds of feet of "dry" Selma Group deposits, as the applicant repeatedly contends, then no stream flow would exist other than flash storm water discharge coinciding with rainfall. The Arrowhead parcel contains Tayloe Creek, unnamed tributaries to the creek, and associated riparian wetlands. Flow is undoubtedly maintained in Tayloe Creek, and the wetlands remain wet, as shallow groundwater is discharged continuously at the surface, further contradicting the applicant's claim that the entire subsurface is "dry" to at least 440 feet bls. As described above, the applicant has installed all shallow monitoring wells in upland areas to depths that are too shallow to encounter groundwater consistently. As a result, the applicant dismisses any water measured in the well as "perched."

Nevertheless, characterization of the shallow groundwater and evaluation of the direction of flow is critical to maintaining the ecological integrity of Tayloe Creek. Without a complete characterization of the site hydrology, accurate and effective monitoring of groundwater and surface water is impossible. The current network of wells provides almost no relevant information concerning the impact of landfill activities on the quality of groundwater and surface water. Such a scheme is both dangerous and illegal.

G. PCA's Phased Approach To Installing Monitoring Wells Violates ADEM Regulations.

The applicant proposes a "phased" approach to installing additional monitoring wells as the new landfill cells and tracts become developed, which may take years or decades. Therefore, it is possible that well locations may become impacted from landfill activities long before the groundwater analytical data become characterized as "background" for some contaminants of interest. This piecemeal method of defining hydrogeologic and groundwater geochemical conditions at already permitted tracts or cells does not comply with the ADEM regulations identified previously.

Additional flaws of the monitoring system include:

1. The applicant fails to propose any additional deep upgradient/background monitoring wells in addition to the two (2) wells that are already installed (wells GMA-1 and GMW-5). However, the applicant's equipotential maps clearly show that

deep well GMW-6 is located hydraulically upgradient of the Tract 1 landfill, yet that well is designated as “downgradient.”

2. The applicant fails to identify any of the shallow monitoring wells as hydraulically upgradient of Tract 1. Consequently, the applicant has failed to establish any “background” wells in direct violation of ADEM regulations. Ala. Admin. Code r. 335-13-4.27(2). In fact, the equipotential map produced the March 2016 submission shows at least one shallow monitoring well that is hydraulically-upgradient relative to the Tract 1 disposal cells. This fact is either not recognized, or it is intentionally ignored, by PCA.
3. Detection limits of monitoring parameters are too high to provide timely warning of water contamination. A major shortcoming of PCA’s current and future water-quality monitoring at the Arrowhead facility is the application of regulatory standards (Maximum Contaminant Levels or “MCLs”) as the maximum analytical detection limit for contaminants. The targeted metals and inorganic constituents that are commonly liberated from coal ash in contact with water are listed in the applicant’s Groundwater Detection Monitoring Plan on page DMP-2, which is reproduced below.

METALS & INORGANICS	EPA METHOD	MAXIMUM DETECTION LIMIT	
		µg/l	Based on:
Antimony	6010/6020/7040/7041	6	MCL
Arsenic	6010/6020/7060/7061	10	MCL
Barium	6010/6020/7080	2000	MCL
Beryllium	6010/6020/7090/7091	4	MCL
Cadmium	6010/6020/7130/7031	5	MCL
Chromium	6010/6020/7090/7091	100	MCL
Cobalt	6010/6020/7200/7201	70	PQL
Copper	6010/6020/7210/7211	60	PQL
Lead	6010/6020/7420/7421	15	MCL
Mercury	7470	2	MCL
Nickel	6010/6020/7520	100	MCL
Selenium	6010/6020/7740/7741	50	MCL
Silver	6010/6020/7760/7761	70	PQL
Thallium	6010/6020/7840/7841	2	MCL
Vanadium	6010/6020/7910/7911	80	PQL
Zinc	6010/6020/7950/7951	20	PQL
Boron	6010/6020	50	PQL
Calcium	6010/6020	100	PQL
Chloride	9056A	250,000	2-MCL
Fluoride	9056A	4,000	MCL
Sulfate	9056A	250,000	2-MCL
Total Dissolved Solids (TDS)	2540C	500,000	2-MCL

Figure 2: Metals and Constituents Commonly Found in Coal Ash

The first 17 constituents are metals with varying degrees of toxicity, most of which are commonly referred to as “heavy metals.” The laboratory reporting limit for eleven (11) of those metals are the federal government’s health-based maximum contaminant concentration (MCL). For example, arsenic is routinely detectable and reliably quantified in groundwater samples at concentrations much less than one (1) microgram per liter (µg/L), yet the applicant chooses not to know if arsenic is present in any water sample until it reaches the 10 µg/L threshold. Setting an artificially high filter on contaminant concentration data is disingenuous and not protective of human health and the environment because concentrations of a particular contaminant could be increasing steadily through time prior to reaching that arbitrary threshold. Monitoring all detectable concentrations, regardless of the MCL or other reporting limit, can allow the applicant to (1) identify an ongoing release, thus revealing problems with the landfill’s liner or leachate-collection system; (2) evaluate the migration

pattern of a groundwater contaminant plume; and (3) give the applicant additional opportunity to enact a remedy prior to exceeding a regulatory standard.

The maximum detection limits for the six (6) other metals listed in the table on page DMP-2 (see above) that have no federal MCL (e.g., cobalt) are set at an apparently arbitrary “practical quantitation limit” (PQL). Cobalt can be quantified routinely and reliably in groundwater samples at a concentration one order of magnitude lower than that of arsenic by the analytical methods specified in the applicant’s table, yet PCA chooses not to know if cobalt is present until the concentration reaches at least 70 µg/L, or approximately four orders of magnitude (1,000x) greater than a laboratory can quantify. PCA’s ‘don’t ask’ approach to contaminant monitoring is not protective of human health and the environment, and it essentially circumvents the ADEM’s regulations regarding the establishment of naturally-occurring background concentrations and statistically significant increases (SSIs) employed to verify the nature of contaminant releases and plume migration.

H. GGH’s Post-Closure Monitoring Plan Is Insufficient And Will Not Provide Long-Term Protection Of Area Ground And Surface Water.

Finally, the 30-year period established for post-closure monitoring is inadequate. Groundwater polluted by heavy metals can persist for many decades or centuries, and a landfill’s liner will eventually fail. See U.S.EPA, Human and Ecological Risk Assessment of Coal Combustion Residuals, Docket No. EPA-HQ-RCRA-0640-2009-11993 (Dec. 2014). There should be a long-term monitoring and caretaking plan enacted for the Arrowhead facility that is at least several times longer than the current 30-year monitoring period.

IV. ADEM SHOULD REVOKE THE PERMIT BECAUSE THE RECORD OF COMPLAINTS OF STORMWATER RUNOFF INDICATES THAT THE LANDFILL MAY BE IN VIOLATION OF ADEM DESIGN AND OPERATING CRITERIA IN CHAPTER 4, DIVISION 335-13-14, AS WELL AS THE FEDERAL CLEAN WATER ACT.

Another critical component to ensure that a landfill site is suitable for waste disposal is to require a permit applicant to demonstrate that it has adequate controls in place to prevent stormwater overflows, especially when stormwater may be commingled with landfill waste or leachate. The available evidence indicates that the Arrowhead Landfill has failed to implement such controls, resulting in frequent stormwater runoff entering Chilhatchee Creek and washing on to neighboring properties in violation both of ADEM landfill design and operating criteria and (at least potentially) the Landfill’s federal Clean Water Act permit. Available sampling data, previously shared with ADEM, from Dr. Elizabeth Dobbins of Samford University, suggests that this runoff is having a harmful impact on water quality in the Creek, with significant

concentrations of heavy metals, conductivity, arsenic, and other signifiers of coal ash pollution having been detected. Using its authority under Chapter 4, Division 335-13-14 of its regulations, ADEM should revoke the Landfill's permit and take further action to investigate the impacts of stormwater pollution on Chilhatchee Creek and neighboring properties.

A. Despite Repeated Complaints Of Stormwater Overflows Into Chilhatchee Creek And Onto Neighboring Property, ADEM Has Not Taken Action.

For years, local residents have raised concerns about stormwater runoff cascading off of the Landfill site on the southwest side into Chilhatchee Creek and its tributaries, which frequently results in Landfill overflows flooding neighboring properties on the other side of County Road 1. *See, e.g.*, Declaration of [Ex. 6 Personal Privacy (PP)] (dated Mar. 7, 2016), ¶¶ 11, 16, attached with exhibits hereto as Ex. 28; [Ex. 6 Personal Privacy (PP)] Decl., Ex. 24 ¶¶ 15, 17, 24, 27, 28. Numerous formal complaints have been filed with ADEM about these stormwater overflows, including the following:

- ADEM Complaint No. 1Q-002UT1Q43 (Apr. 8, 2015)
- ADEM Complaint No. 7L-008AM3H00 (Apr. 15, 2015)
- ADEM Complaint No. 7P-004AG6I17 (Apr. 15, 2015)
- ADEM Complaint No. 7K-002WD5E88 (Nov. 12, 2015)
- ADEM Complaint No. 6F-008BR4C12 (Nov. 13, 2015)
- ADEM Complaint No. 2H-007PV2F57 (Nov. 20, 2015)
- ADEM Complaint No. 2R-004GY7N17 (Nov. 23, 2015)
- ADEM Complaint No. 4P-007YP0I86 (Dec. 1, 2015)
- ADEM Complaint No. 4U-008JL0Q73 (Dec. 7, 2015)
- ADEM Complaint No. 0Q-006MA5J58 (Mar. 11, 2016)

See also [Ex. 6 Personal Privacy (PP)] Decl., Ex. 28 ¶¶ 11, 15–16 (describing other dates that stormwater overflows were observed but additional complaints were not made). These complaints all raise the issue of stormwater overflows. Some of the complaints refer additionally to a “whitish discharge” (Complaint No. 7K-002WD5E88) and of “greasy, milky water” (Complaint No. 2R-004GY7N17). *See also* [Ex. 6 Personal Privacy (PP)] Decl., Ex. 24 ¶ 17 (describing observations of land where stormwater overflows had occurred as “covered in a fine white powder”). In addition, local residents and visitors to the Landfill site have observed that the Landfill appears to be intentionally discharging significant portions of these stormwater overflows through pipes set up for that purpose. *See id.* ¶¶ 15, 17; [Ex. 6 Personal Privacy (PP)] Decl., Ex. 28 ¶¶ 14–15 (describing this as an “unpermitted outfall”).

ADEM's only formal response to these complaints was to conduct two inspections, on April 17, 2015 and November 13, 2015. Each of these inspections confirmed the existence of a stormwater overflow, and sampling indicated elevated turbidity levels, but no further action was taken to characterize the pollutants in the stormwater overflows or determine whether they contain leachate from the Landfill.⁵ Nor do the ADEM inspections appear to have evaluated whether the Landfill's stormwater controls comply with ADEM regulations or to have evaluated whether the Landfill was discharging stormwater through a pipe in violation of its Clean Water Act permit.

B. Stormwater Runoff To Chilhatchee Creek Violates ADEM Design And Operating Criteria And May Violate The Landfill's Clean Water Act Permit.

The stormwater overflows to Chilhatchee Creek that are documented in the record violate both ADEM regulations in Chapter 335-13-4, establishing design and operating criteria for the Landfill, as well as the Landfill's federal Clean Water Act permit.

ADEM regulations specify design criteria require that the Landfill's stormwater control system "control at least the water volume resulting from a 24-hour, 25-year storm." Ala. Admin. Code r. 335-13-4-.17(2). A separate provision in ADEM regulations, establishing operating criteria for the Landfill, requires that leachate be collected (and not discharged to surface waters) consistent with the terms of the Landfill's operating permit. *See id.* § 335-13-4-.21(1)(a) (facility must operate as stipulated in the permit); 335-13-4-.18 (leachate collection requirements); *see also id.* § 335-13-4-.01(2) (discharges prohibited).

The Landfill's repeated practice of allowing stormwater overflows to flood Chilhatchee Creek and neighboring properties plainly violates these design criteria. If the Landfill's stormwater controls were designed to adequately manage a 24-hour, 25-year storm, then the repeated instances of stormwater overflows observed from 2014–2016 would not have occurred. *See* Ex. 6 Personal Privacy (PP) Decl., Ex. 28 ¶ 11. And by routinely discharging to Chilhatchee Creek during storm events, the Landfill is in effect using the Creek as a stormwater control, in violation of the the requirement that leachate be collected and not discharged. Ala. Admin. Code r. 335-13-4-.01, 335-13-4-.18. These violations of ADEM design and operating criteria, standing alone, require revocation of the Landfill's permit (and denial of the pending permit

⁵ During both inspections, samples were taken to test for turbidity. In the November 2015 inspection, samples were also taken to test for dissolved oxygen and pH. But in neither inspection were samples taken to test for conductivity, heavy metals, arsenic, or other signifiers of coal ash contamination (as would be expected to be found in the Landfill's leachate).

renewal application) under Alabama Administrative Code § 335-13-4-.01(3) (solid waste disposal sites must comply with all applicable laws and regulations).

In addition, the ADEM regulation that establishes design criteria for the Landfill also incorporates the requirement that the Landfill not discharge in violation of its federal Clean Water Act permit. *See id.* § 335-13-4-.21(1); ADEM, National Pollution Discharge Elimination System General Permit, Permit No. ALG160167 (effective Feb. 1, 2012) (“Arrowhead NPDES Permit”) The stormwater overflows to Chilhatchee Creek that are documented in the record likely also violate that permit. First, to the extent that stormwater is being discharged to Chilhatchee Creek through a pipe (as opposed to simply running off the site into the Creek), that would make it point source pollution that is prohibited by the permit. *See* 33 U.S.C. § 1362(14) (defining “point source” to mean “any discernible, confined and discrete conveyance, including but not limited to any pipe . . .”). Because the Landfill did not identify discharges to Chilhatchee Creek in its notice of intent to comply with its NPDES general permit, any such discharges are expressly prohibited by the permit. *See* Arrowhead NPDES Permit at pt. 2, § E.1.c. (duty to comply includes prohibition on any “discharge of a pollutant from a source not specifically identified in the Notice of Intent . . . and not specifically included in the description of an outfall”). Second, to the extent that the stormwater discharges contain any leachate and/or violate water quality standards, this would also further violate the permit. *See id.* at 3–4 (prohibiting discharge of leachate), 21 (requiring compliance with state water quality standards); *see also* Ala. Admin. Code r. 335-13-4-.01(e). Accordingly, any discharges of stormwater to Chilhatchee Creek through pipes also violate the Landfill’s Clean Water Act permit and, by extension, ADEM design criteria for the Landfill. This constitutes a separate basis for revoking the Landfill’s permit here and denying its application for permit renewal.

C. Available Sampling Data Indicates That Stormwater Runoff Has Resulted In Harmful Pollution Of Chilhatchee Creek And Neighboring Properties.

Furthermore, sampling data previously made available to ADEM indicates that the Landfill’s stormwater overflows to Chilhatchee Creek and neighboring properties have also caused significant harm to water quality and the environment. Independent scientist Dr. Ex. 6 Personal Privacy (PP) a professor of natural sciences at Samford University for over twenty years, has collected preliminary samples of surface water near the Landfill. As described in detail in a declaration that she executed in March 2016 (*see* Ex. 24), she found high levels of heavy metals, conductivity, arsenic, and other signifiers of coal ash. These are serious red flags that she believes indicate that ADEM must conduct further testing, as her equipment and methods only allowed for a preliminary scan of the area.

In February 2013, [Ex. 6 Personal Privacy (PP)] first found “measureable differences in arsenic in the water adjacent to the Landfill compared to the control site.” [Ex. 6 Personal Privacy (PP)] Decl., Ex. 24 ¶ 10. She was “very surprised by these results,” retested them to confirm the result, and then sent an immediate email to ADEM. *Id.* [Ex. 6 Personal Privacy (PP)] believed it was her duty as a scientist to report these preliminary findings so that ADEM could investigate them further. She reported these results in a chart that she shared with ADEM. *See* Jeff Cole & E.G. Dobbins, *Effects of Surface Runoff From a Landfill Containing Coal Ash on Water Chemistry in Adjacent Surface Water in Perry County, Alabama*, attached hereto as Ex. 29..

In the summer of 2013, [Ex. 6 Personal Privacy (PP)] returned to the waters around the Landfill and found almost no invertebrates of the kind one would expect in the ecologically-rich Alabama water. [Ex. 6 Personal Privacy (PP)] Decl., Ex. 24 ¶ 13. She also collected water samples near the Landfill and from a tributary that runs through a resident’s property where fugitive Landfill discharge was happening. *Id.* ¶¶ 14–15. She collected water coming from a pipe from the Landfill, in Chilhatchee Creek, and in a small tributary that runs into Chilhatchee Creek. *Id.* ¶¶ 16–17. She noticed that “soil and leaves around the water from the Landfill, in the culvert, and in the tributary that runs through [Ex. 6 Personal Privacy (PP)] land were covered in a fine white powder,” which was not visible in other sites in Perry County. *Id.* Her data showed “statistically significant differences between the control and testing sites near the land fill and on [Ex. 6 Personal Privacy (PP)] property for arsenic, total dissolved solids, and conductivity.” *Id.* ¶ 19. The data for these results are attached as Ex. 30.

[Ex. 6 Personal Privacy (PP)] returned on February 23, 2015 and collected water samples near the Landfill and the same control streams. *Id.* ¶ 24. These samples showed large variations in conductivity, which indicates a change in the ionic composition of the water. *Id.* She also found “differences between the control site, [Ex. 6 Personal Privacy (PP)] property, and where water pools as it exits the Landfill in calcium, cadmium, cesium, iron, magnesium, manganese, rhenium, rubidium, selenium, sodium, strontium, sulfur, and tin.” *Id.* ¶ 25. The most dramatic differences she found were in iron and strontium. *Id.*⁶

ADEM has taken no known action to address or evaluate these preliminary findings. It is our understanding, however, that in recent months the Landfill has executed an “improvement plan” to regrade the southwestern portion of the site to direct stormwater away from Chilhatchee Creek. Before making any decision on the pending permit renewal, however,

⁶ This is consistent with findings by other scientists about the chemical composition of the coal ash from the TVA coal ash spill, which found calcium, magnesium, aluminum, strontium, arsenic, barium, nickel, lithium, vanadium, copper, and chromium. *See* Laura Ruhl et al., *Survey of the Potential Environmental and Health Impacts in the Immediate Aftermath of the Coal Ash Spill in Kingston, Tennessee*, 43 *Envtl. Sci. & Tech.* 6326, 6326 (2009).

ADEM must fully investigate whether this is true. Moreover, even if it is true that the Landfill has addressed these stormwater overflows going forward, this does not address the significant impacts that [Ex. 6 Personal Privacy (PP)] sampling has identified on water quality and the environment that have resulted from years of pollution that has already occurred. This is especially true if further testing confirms that pollutants associated with coal ash contamination are present in significant levels in Chilhatchee Creek. As [Ex. 6 Personal Privacy (PP)] recommends in her declaration, ADEM should test water, soil, and dust in the vicinity of Chilhatchee Creek “for the full panoply of metals associated with coal ash using the most sensitive tests.” *Id.* ¶ 30. [Ex. 6 Personal Privacy (PP)] also recommends testing both plants and wells in the vicinity of the Landfill for contamination. *Id.* Such testing is needed to address the concerns of local residents and neighboring property owners and ensure that contamination from the Landfill’s stormwater overflows is not endangering human health and the environment.

V. ADEM MUST REJECT THE ARROWHEAD PERMIT RENEWAL BECAUSE PCA’S PLAN FOR COAL COMBUSTION RESIDUALS IS GROSSLY DEFICIENT AND FAILS TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT FROM THE HAZARDOUS POLLUTANTS IN COAL ASH.

The Arrowhead Landfill’s permit renewal application contains a plan for disposal of CCR, *see* Hodges, Harbin, Newberry & Tribble, Inc., CCR Acceptance Plan, *in* App. J to Vol. 2 of PCA’s Permit Application (“CCR Acceptance Plan”), that purports to address the EPA’s directives for enhancing operating procedures at MSWLFs that accept coal ash. The unenforceable plan, however, is grossly deficient and cannot provide protection of health and the environment from disposal of coal ash in Arrowhead Landfill. The Plan lacks all of the critical safeguards identified as necessary by EPA for such landfills.

In its final coal ash rule published on April 17, 2015, EPA specifically identified numerous requirements that states should impose on MSWLFs that accept coal ash. *See* Disposal of Coal Combustion Residuals From Electric Utilities, 80 Fed. Reg. 21,302, 21,430–21,434 (Apr. 17, 2015) (to be codified at 40 C.F.R. pts. 257 & 261) (“CCR rule”). EPA acknowledged that in the absence of these requirements, MSWLFs that receive coal ash may endanger health and the environment through the release of toxic pollutants. In fact, EPA stated explicitly in the preamble to the CCR rule that it “expects that State Directors will *require MSWLFs to modify their MSWLF permits* to address” several important program requirements that are absent in current regulations governing MSWLFs. *Id.* at 21,341–42. As described below, these requirements specifically address protection of air and water from coal ash contaminants and address issues of waste management, structural stability and waste compatibility that arise from the disposal of coal ash at MSWLFs. Because the Draft Permit does not contain

enforceable requirements mandating these critical safeguards, ADEM must deny renewal of the permit and prohibit the acceptance of additional coal ash at the Arrowhead Landfill.

A. The Arrowhead Landfill Permit Fails to Protect the Uniontown Community from Toxic Coal Ash Fugitive Dust.

PCA's permit application for Arrowhead Landfill does not contain a Fugitive Dust Control Plan, as required for coal ash landfills at 40 C.F.R. § 257.80(b). In fact, the Draft Permit provides only a single paragraph addressing fugitive dust control. In this paragraph, PCA admits that the trucks carrying coal ash from the rail yard to the working area of the landfill will *not* be routinely covered. The plan states only that "trucks *may* be covered if needed to prevent ash from blowing out of the trucks." CCR Acceptance Plan at 7 (emphasis added.) Yet the permit also anticipates receiving as much as 15,000 tons of coal ash a day, which could mean 500 to 750 trucks (up to 75 trucks per hour based on a 10-hour operating day) hauling an average of 20 to 30 tons of coal ash per truck.⁷ Hauling coal ash in open trucks over the landfill's dirt roads is certain to cause fugitive dust problems. Further, PCA has also stated that it will be operating three active tracts at the landfill simultaneously, which increases the likelihood of generating harmful quantities of fugitive dust. Letter from William F. Hodges, Hodges, Harbin, Newberry & Tribble, Inc., to Shane Lovett, Sr. Env'tl. Eng'r, ADEM at 2 (revised July 14, 2016), *in* 2016 Permit Application.

Despite the high risk of generating dangerous levels of fugitive dust, the Arrowhead Landfill permit provides for *no air monitoring, no mandated dust suppression, no inspections for dust, and no mechanism for recording and responding to complaints when dust problems occur*. In light of the severe fugitive dust problems documented at the Arrowhead Landfill in 2009-2010 (*see infra* at Sections II.A.2 & V.A.) and the damage that occurred to the health of the neighboring community from coal ash dust, it is unconscionable that effective, enforceable controls are not required.

Based on several years of technical review involving many lines of evidence, EPA recognized that fugitive dust from coal ash disposal at landfills creates an unreasonable probability of adverse effects on health and the environment if not properly controlled. *See* 80 Fed. Reg. at 21,386–88. In its analysis of the risks posed by fugitive dust from coal ash landfills, EPA concluded that, absent controls, dust levels at nearby locations could exceed the 24-hour PM_{2.5} National Ambient Air Quality Standard for fine particulates. *Id.* at 21,386; *see also* Office

⁷ For example, Duke Energy employed 20-ton loads in transporting coal ash from the Riverbend Steam Station. *See* Jim Bradley, *Trucks Hauling al Ash Concern Residents*, WSOCTV.com, May 22, 2015, http://www.wsocvtv.com/news/local/trucks-hauling-coal-ash-concern-residents_nmmtf/52880344.

of Solid Waste and Emergency Response, EPA, Inhalation of Fugitive Dust: A Screening Assessment of the Risks Posed by Coal Combustion Waste Landfills (drft. Sept. 2009), attached hereto as Ex. 31.. EPA also found that excessive cancer risks are associated with the inhalation of hexavalent chromium in coal ash fugitive dust for residents who live in close proximity to a landfill accepting coal ash such as Arrowhead. 80 Fed. Reg. at 21,386.

Furthermore, in support of the requirements pertaining to the control of fugitive dust in the CCR rule, EPA collected evidence of fugitive dust exposure at eight public hearings on the proposed rule conducted by the agency in 2010. At these hearings, stakeholders provided extensive information about fugitive dust impacts associated with coal ash disposal adjacent to their residences. Citizen groups and local officials provided EPA with documented reports on the adverse impacts of fugitive dust to local communities, including Uniontown., *See id.*; *see also Hazardous and Solid Waste Management System; Identification and Listing of Solid Wastes; Disposal of Coal Combustion Residuals from Electric Utilities: Public Hearing on EPA's Proposed Rule in Arlington, Va.* At 41–43 (Aug. 30, 2010), available at <https://archive.epa.gov/epawaste/nonhaz/industrial/special/fossil/web/pdf/transcript-arlington-va.pdf> (statement of Michael Jackson, Dist. Att'y, Alabama's 4th Circuit). In addition, EPA compiled records of more than twenty documented fugitive dust cases indicating that dust problems arise in all phases of the coal ash life cycle—from “conveyor belt transfer at the coal-fired power plant, through stockpiling and transport . . . to final disposition.” 80 Fed. Reg. at 21,836. EPA's findings are contained in a technical support document to the CCR Rule titled “Damage Cases: Fugitive Dust Impact,” attached hereto as Ex. 32.

Consequently, the EPA's CCR rule contains air criteria that require owners and operators of coal ash landfills to “adopt measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities.” 40 C.F.R. § 257.80(a). The rule's mandatory measures include development of a site-specific CCR fugitive dust control plan, conditioning of CCR placed in landfills (treating CCR with water or dust suppression agents to prevent wind dispersal), establishing procedures to log citizen complaints, and annual reports documenting compliance. *See id.* § 257.80(b).

Alabama's solid waste landfill criteria contain *none* of the specific air criteria of the CCR rule. *See* Ala. Admin. Code chs. 335-13-1 to 335-13-14. The permit should therefore be revoked.

Moreover, the proposed permit does not conform to ADEM's Fugitive Dust and Fugitive Emissions rule. *Id.* r. 335-3-4-.02. The Alabama Administrative Code requires all MSWLFs to ensure that they “do not violate any applicable requirements developed under a State

Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to Section 110 of the Clean Air Act, as amended.” *Id.* r. 335-13-4-.22(3)(a). Since ADEM’s Fugitive Dust and Fugitive Emissions Rule is part of Alabama’s State Implementation Plan, *see* Air Division, ADEM, State Implementation Plan, ch. 335-3-4 , *available at* <https://www3.epa.gov/region4/air/sips/al/content.htm> (“Ala. SIP”), it has therefore been approved by the Administrator under section 110 of the Clean Air Act, 42 U.S.C. § 7410, and therefore violates Ala. Admin. Code r. 335-13-5-.22(3)(a). *See* 40 C.F.R. §§ 52.50, 52.53.

ADEM’s Fugitive Dust and Fugitive Emissions Rule:

(1) requires “reasonable precautions to prevent particulate matter from becoming airborne”;

(2) prohibits the “discharge of visible fugitive dust emissions” beyond the properly line where the emissions originate; and

(3) authorizes ADEM to order certain actions “[w]hen dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any rule or regulation”

Ala. Admin. Code r. 335-3-4-.02(1)–(3). Although parts of ADEM’s fugitive dust rule were declared unconstitutional by the Alabama Supreme Court in *Ross Neely Express, Inc. v. Alabama Department of Environmental Management*, 437 So. 2d 82, 85–86 (Ala. 1983), Alabama has neither repealed the rule nor sought or obtained EPA approval of a revision of its State Implementation Plan. Accordingly, the rule continues to be included in the “applicable implementation plan” under the Clean Air Act. *See, e.g., Gen. Motors Corp. v. United States*, 496 U.S. 530, 540 (1990) (“There can be little or no doubt that the existing SIP remains the ‘applicable implementation plan’ even after the State has submitted a proposed revision.”); *Safe Air for Everyone v. U.S. EPA*, 488 F.3d 1088, 1097 (9th Cir. 2007) (“[A] state may not unilaterally alter the legal commitments of its SIP once EPA approves the plan”).

EPA has determined that ADEM has ample authority to regulate and control fugitive dust emissions from landfills notwithstanding *Ross Neely*, since the rule continues to be included in the “applicable implementation plan” under the Clean Air Act. *See* Alexander Livnat, EPA Technical Support Document, Damage Cases: Fugitive Dust Impact (2014), Ex. 3X.

Moreover, EPA’s promulgation of the CCR rule specifying the measures to be taken to prevent fugitive dust from becoming airborne now informs the “reasonable precautions” required under paragraph (1) of the fugitive dust rule. Ala. Admin. Code r. 335-3-4-.02(1). The

Alabama Supreme Court's concern in *Ross Neely* that the rule's "reasonable precautions" requirement was "unduly vague," 437 So. 2d at 84–85, has now been clarified by federal law.

In addition, the Court's decision in *Ross Neely* did not address or invalidate paragraph (3) of the Fugitive Dust and Fugitive Emissions Rule in any way. Ala. Admin. Code r. 335-3-4-.02(3) states, in full:

When dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any rule or regulation, the Director may order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air.

(Emphasis added.)

ADEM's MSWLF regulations also authorizes controls on fugitive dust and fugitive emissions. That section provides:

Notwithstanding this Rule, additional requirements for operating and maintaining a MSWLF may be imposed by the Department, as deemed necessary, to comply with the Act and this Division.

Id. r. 335-13-4-.22(3)(b).

Thus, ADEM is authorized to require reductions in the adverse impacts of fugitive dust at the Complainants' residences.⁸ Arrowhead Landfill's permits, however, have long failed to comply with ADEM's Fugitive Dust and Fugitive Emissions rule or otherwise contain adequate controls to prevent the fugitive dust from becoming airborne. The current proposed permit is no different. The permit should therefore be revoked.

In the event that ADEM approves a permit renewal, which it should not, PCA must, at a minimum, be held to the enforceable standard set forth in 40 C.F.R. § 257.80(a) requiring that owners or operators of a landfill accepting CCR "adopt measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities." In light of the

⁸ ADEM regulations pertaining to MSWLFs also impose a 100-foot buffer requirement. Ala. Admin. Code r. 335-13-4-.12(2)(f). Such buffers can reduce the impact of dust, as well as other harmful air and water releases. ADEM must ensure that the current permit application complies strictly with the buffer zone requirement.

severe damage to the health of Uniontown residents caused by the Arrowhead Landfill's coal ash fugitive dust in 2009-2010, PCA must also be required to install an air monitoring system to ensure that the 24-hour PM_{2.5} National Ambient Air Quality Standard for fine particulates is not exceeded. However, in light of past dust generation, the proximity of homes to the landfill tracts, and the absence of enforceable standards in Alabama regulations pertaining to coal ash fugitive dust, ADEM must prohibit the placement of additional coal ash in the Arrowhead Landfill.⁹

B. Arrowhead Landfill's Leachate Collection and Removal System Is Not Sufficiently Protective of Health and the Environment Because it Does Not Address Specific Risks from Coal Ash.

EPA established design criteria for leachate collection and removal systems for all new coal ash landfills and lateral expansions of existing coal ash landfills. *See* 40 C.F.R. § 257.70. Because liners and leachate collection systems are the first line of defense against groundwater contamination from coal ash, it is essential that all new and expanded MSWLFs be required to employ systems that EPA has determined will meet the protectiveness standard for coal ash disposal set forth in subtitle D of the Resource Conservation and Recovery Act, *See* 42 U.S.C. § 6944(a). ADEM's design specifications for leachate collection systems applicable to the Arrowhead Landfill are not, however, equivalent to the new standard. *See* Ala. Admin. Code r. 335-13-4-.18(2).

Specifically, the CCR rule requires all new coal ash landfills to have a leachate collection and removal system designed and operated to maintain less than a 30-centimeter depth of leachate. 40 C.F.R. § 257.70(d)(1). This requirement is consistent with ADEM's requirement for leachate collection systems required at MSWLFs. Ala. Admin. Code r. 335-13-4-.18(2). EPA, however, also explicitly recognized that leachate collection and removal systems for coal ash landfills require additional safeguards to operate correctly. *See* 80 Fed. Reg. at 21,372. Consequently, EPA requires leachate collection and removal systems in coal ash landfills to "be constructed of sufficient strength and thickness to prevent collapse from the pressure of the CCR and to minimize clogging during the active life and post closure care period." *Id.*; *see* 40 C.F.R. § 257.70(d)(2), (3). ADEM does not impose this requirement on MSWLFs that receive

⁹ It has been reported that PCA used coal ash as a cover material at Arrowhead Landfill for many months until EPA Region 4 required ADEM to advise PCA to stop that practice. It is not known whether the coal ash was removed from those sections of the landfill, nor whether the coal ash was used as cover for household garbage. If the coal ash was not removed, Uniontown may continue to be at risk from interaction of coal ash and household garbage and the damages that may occur throughout the disposal system from their incompatibilities. The current permit application continues to allow "Alternate Daily Covers." Draft Permit § III.H. ADEM must ensure that cover material is safe and appropriate and does not contribute to increased environmental and health risks.

coal ash, and consequently the Arrowhead Landfill is not required to meet that critical standard. See Christopher D. Hardin & Nick L. Perotta, Haley & Aldrich, Inc., Operations and Maintenance Guidelines for Coal Ash Landfills—Coal Ash Landfills are NOT the Same as Subtitle D Solid Waste Landfills, Presentation at 2011 World of Coal Ash Conference (May 9–12, 2011), available at <http://www.flyash.info/2011/127-Hardin-2011.pdf>. As a result, the Arrowhead Landfill permit provides an inadequate level of protection to health and the environment for all tracts that may accept coal ash. The permit therefore must not be renewed.

C. The Arrowhead Landfill’s Groundwater Monitoring and Corrective Action Plans Fail to Protect Health and the Environment Because Common Coal Ash Pollutants Are Excluded, and Consequently the Plans Cannot Detect and Prevent Groundwater Pollution.

EPA established groundwater monitoring and corrective action requirements in the CCR rule to ensure that groundwater contamination at new and existing coal ash landfills will be timely detected and thoroughly remediated as necessary to protect human health and the environment. See 80 Fed. Reg. at 21,370. EPA’s documented damage cases and risk assessments indicate there is significant potential for coal ash landfills to leach hazardous constituents into groundwater, impair drinking water supplies and cause adverse impacts on human health and the environment. *Id.* at 21,452–21,459; see generally Alexander Livnat, CCR Damage Case Database, Technical Support Document on Damage Cases, Docket No. EPA-HQ-RCRA-2009-0640 (Dec. 18, 2014) (“EPA Damage Case Compendium”), attached hereto as Ex. 33. Indeed, EPA identified groundwater contamination as “one of the key environmental and human health risks” posed by coal ash landfills. 80 Fed. Reg. at 21,396. Groundwater monitoring is a key mechanism for facilities to verify that the existing containment structures, such as liners and leachate collection and removal systems, are functioning as intended. Thus, according to EPA, in order for a coal ash landfill to show no reasonable probability of adverse effects on health or the environment, a system of groundwater monitoring to detect any contamination and corrective action requirements to remediate identified contamination, are essential. See *id.* at 21,396–97.

However, the Arrowhead Landfill’s permit requirements for groundwater monitoring and corrective action fall far short of the requirements in the CCR rule. The permit does not require Arrowhead to establish background contaminant levels for common coal ash constituents, including boron, calcium, chloride, fluoride, sulfate, and total dissolved solids (TDS). Absent the requirement to establish background values, it will be impossible for the operators to determine whether groundwater has been adversely impacted. Even if Arrowhead’s permit requires the landfill to monitor for these constituents, there will never be an enforceable requirement to clean up groundwater for these constituents absent background

values. EPA, in fact, explicitly and “strongly” recommended that State Directors of approved municipal solid waste programs require landfill owners to determine background levels of these common inorganic indicator parameters and include these parameters in the detection monitoring program. *Id.* at 21,342. These inorganic indicator parameters are known to be leading indicators of coal ash releases. *Id.* Yet the Arrowhead Landfill permit has no such requirement.

Similarly, in order to ensure that effective corrective action (cleanup) occurs at the Arrowhead Landfill, all constituents for *assessment monitoring* in the CCR rule, set forth at 40 C.F.R. pt. 257, app. IV, must be included in Appendix II of Ala. Admin. Code r. 335-13-4. Appendix II is the list of constituents that will drive cleanup actions at the landfill. *See* Draft Permit, § 4.B.3 & tbl.IV.2. In the Arrowhead Landfill permit, however, Appendix II omits the following common coal ash constituents: boron, fluoride, lithium, molybdenum and radium 226 and 228, combined. Consequently, the corrective action requirements in the Arrowhead Landfill permit are insufficient to ensure that releases of coal ash contaminants are promptly detected and remediated. If any of the toxic constituents absent from Appendix I are found in groundwater monitoring wells at the Arrowhead Landfill as a result of coal ash leachate leaking from the landfill, *no cleanup will be required under the permit*. For this reason, ADEM must reject the permit and/or prohibit the disposal of toxic coal ash.

Lastly, the Arrowhead Landfill permit establishes the “relevant point of compliance” for groundwater monitoring, 40 C.F.R. § 258.40(d), to be located as many as 150 meters from the waste management unit boundary. *See* Bunnell-Lammons Eng’g, Inc., Environmental Monitoring Plan – Horizontal Expansion at 1 (revised July 13, 2016), *in* Permit Application, Vol. 1, ch. 7. Establishing a point of compliance distant from the landfill allows the contaminated water to extend far beyond the edge of the landfill. This point of compliance thus provides significantly less protection of groundwater than the CCR rule, which requires compliance with groundwater protection standards (e.g., the MCL for most metals) at the waste boundary.¹⁰ *See* 40 C.F.R. § 257.94. ADEM must reject the Arrowhead Landfill permit because it will allow unacceptable groundwater contamination and provide less protection to the residents of Uniontown than to residents near other coal ash landfills.

¹⁰ “Waste [] boundary” is defined in the CCR rule as “a vertical surface located at the hydraulically downgradient limit of the [CCR] unit. This vertical surface extends down into the uppermost aquifer.” 40 C.F.R. § 257.5.

D. The Arrowhead Landfill's "CCR Acceptance Plan" Is Unacceptably Vague and Fails Entirely to Address Critical Problems of Waste Compatibility and Placement.

The Arrowhead Landfill is currently approved to receive up to 15,000 tons a day of coal ash from 33 U.S. states. In 2009-2010, the landfill received more than 4 million tons of coal ash from the TVA Kingston coal ash spill in Tennessee. As a result of coal ash disposal in the Landfill, harmful quantities of hydrogen sulfide gas were generated at levels sufficient to severely sicken members of the Uniontown community. See Ex. 21. It is likely that the gas resulted from the mixing of coal ash with organic material or leachate from the MSWLF. In light of the significant damage that has already occurred, the failure in Arrowhead's CCR Acceptance Plan to address waste characterization, separation, compatibility and placement is unconscionable and wholly unacceptable.

Arrowhead's CCR Acceptance Plan contains none of the safeguards necessary to prevent a reoccurrence of the injurious gas generation or any of the other problems likely to occur when coal ash is co-disposed with municipal solid waste. First, the CCR Acceptance Plan requires absolutely *no waste characterization*. The landfill can receive up to 15,000 tons of coal ash per day "upon approval of an ADEM Form 300 and approval from [the Alabama Department of Public Health]." CCR Acceptance Plan at 3. Yet ADEM Form 300 requires almost no relevant information about the coal ash received. See ADEM, Solid Waste Profile Sheet ("ADEM Form 300"), attached hereto as Ex. 34. It requires PCA to simply check a box to indicate that the coal ash accepted is a solid waste. ADEM Form 300 does not require an owner/operator to supply any information whatsoever concerning the toxicity, corrosivity or liquid content of the coal ash. No information is required concerning the chemical make-up of the coal ash, its pH, whether it contains excess water or other liquids, or even whether the coal ash is radioactive. Secondly, all other aspects of an effective CCR acceptance plan, including requirements addressing separation, compatibility and placement of coal ash within the MSWLF, are missing from Arrowhead's plan. A proper CCR acceptance plan would ensure that the owner/operator is aware of the specific physical and chemical characteristics of the coal ash, including its toxicity, corrosivity and radioactivity, and that the coal ash is handled with the additional precautions necessary to avoid dust, maintain structural integrity, and avoid compromising the gas and leachate collection systems of the landfill so that human health and the environment are protected.

In addition, protection of landfill employees handling coal ash must also be an enforceable element of any permit contemplating the disposal of special waste. Such provisions should include training in the handling of hazardous substances, protective gear, and contingency training to address spills and other emergencies. Coal ash is a hazardous

substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). *See Eagle Picher Indus., Inc. v. United States EPA*, 759 F.2d 922, 926–28 (D.C. Cir. 1985). PCA, however, has never treated coal ash as such at the Arrowhead Landfill. While workers involved in the EPA-led cleanup of the TVA coal ash in Kingston, Tennessee following the 2008 disaster were required to wear haz-mat suits and respirators, no such protection was required by Arrowhead’s permit.

The absence of an effective and enforceable CCR acceptance plan is directly contrary to EPA findings. In the preamble to the CCR rule, EPA made critical recommendations pertaining to waste compatibility and placement when coal ash is disposed in a MSWLF. *See* 80 Fed. Reg. at 21,342. The potential for interactions between coal ash and municipal waste can cause severe odors in the form of hydrogen sulfide gas and raises an unreasonable probability of adverse impacts to health and the environment. In addition, these interactions between wastes can cause chemical incompatibility with landfill liners, filter incompatibility in leachate collection systems, changes in pH due to acid or alkaline coal ash, increases in temperature that may affect landfill gas temperature, and geotechnical problems that may result in saturated zones and slip planes. *See* Don Grahlherr, EPA Coal Ash Rule: Impacts to the Waste & Recycling Industry at slides 35–40 (Apr. 21, 2015), *available at* <http://awmastl.org/blog/wp-content/uploads/CCR-Rule-Impact-to-MSW-Industry.pdf>. EPA concluded that coal ash must be “evaluated for waste compatibility and placement” prior to disposal in a MSWLF. 80 Fed. Reg. at 21,342.

Because the Arrowhead Landfill permit lacks any of these elements, ADEM must reject the permit and prohibit the further placement of coal ash in the landfill.

E. The Arrowhead Landfill Permit Is Not Protective of Human Health and the Environment Because the Permit Does Not Require Sufficient Inspections Nor Does it Require Remediation of Deficiencies when Found.

Arrowhead’s CCR Acceptance Plan indicates that monthly inspections by PCA will be conducted and that the following will be inspected: transfer trucks, fire extinguishers, and electrical controls. CCR Acceptance Plan at 14. There is *no provision* for inspection of the actual coal ash landfill, including liner integrity, landfill slopes, leachate, runoff, integrity of wells, and air quality. There is also no provision for training of inspectors to ensure that they are qualified to inspect a landfill containing toxic and potentially corrosive and radioactive waste. The failure to establish an effective, comprehensive, and enforceable inspection regime places the Uniontown community and its environment at high risk.

In contrast, the CCR rule requires weekly and annual inspections of all coal ash landfills. *See* 40 C.F.R. § 257.84. First, a qualified person must examine all coal ash landfills “[a]t intervals

not exceeding seven days” and he or she must “inspect for any appearances of actual or potential structural weakness and other conditions which are disrupting or have the potential to disrupt the operation or safety” of the landfill. *Id.* § 257.84(a)(1)(i). The results of weekly inspections must be documented in the owner/operator’s operating record. *Id.* § 257.84(a)(1)(ii).

Second, coal ash landfills must be inspected on an annual basis by a professional engineer “to ensure that the design, construction, operation, and maintenance” of the landfill are “consistent with recognized and generally accepted good engineering standards.” *Id.* § 257.84(b). The inspection must, at a minimum, include: (i) “a review of available information regarding the status and condition of the [landfill], including, but not limited to, files available in the operating record (e.g., the results of [weekly and annual] inspections) . . . ;” and (ii) a visual inspection of the landfill “to identify signs of distress or malfunction.” *Id.* § 257.84(b)(1)(i)–(ii). The professional engineer must prepare a report following each inspection that addresses: (i) “[a]ny changes in geometry of the structure since the previous annual inspection”; (ii) “[t]he approximate volume of [coal ash] contained in the unit . . . ;” (iii) “[a]ny appearances of an actual or potential structural weakness of the [landfill], in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety” of the landfill; and (iv) any “other change(s) which may have affected the stability or operation of the [landfill] since the previous annual inspection.” *Id.* § 257.84(b)(2). The owner/operator must place all annual inspections in the operating record, submit a notification to the State at completion, and post the inspection report on a publicly accessible internet website. *See id.* §§ 257.105(g), 257.106(g) & 257.107(g). Lastly, if a deficiency or release is identified during an inspection, “the owner or operator must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken.” *Id.* § 257.84(b)(5).

While these periodic inspections are recognized as an essential safeguard for all coal ash landfills, the Draft Permit requires no meaningful inspections whatsoever. Because disposal of coal ash can involve serious and time-sensitive problems involving structural stability, fugitive dust, noxious gas generation, hazardous material releases, and adverse waste interactions, frequent inspections are essential to ensure no adverse impact on the residents of Uniontown. As ADEM is aware, several of these serious problems have already occurred at the Arrowhead Landfill, so the absence of an enforceable and stringent inspection regime is wholly unacceptable. For this reason, ADEM must reject the permit and prohibit placement of additional coal ash in the Arrowhead Landfill.

F. The Arrowhead Landfill Permit is not in compliance with ADEM's siting restriction for placement of coal ash five feet above the uppermost aquifer because PCA has not established the location of the uppermost aquifer.

ADEM regulations require PCA to design the landfill so that the bottom elevation of the liner is a minimum of five feet above the highest measured groundwater level. *See* ADEM Admin. Code r. 335-13-4.11(2). However, as discussed in more detail in Section III.E of these comments, PCA has failed to determine the location of the uppermost aquifer.

Under the CCR rule, EPA is requiring new coal ash landfills and all lateral expansions to be “constructed with a base that is located no less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer” or to “demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the [landfill] and the uppermost aquifer due to normal fluctuations in groundwater elevations” including groundwater elevations during the wet season. 40 C.F.R. § 257.60(a). New coal ash landfills and lateral expansions cannot be constructed unless they meet one of these two standards. *Id.* EPA is imposing this condition because, when the groundwater elevation is high enough to intersect the base of a coal ash landfill, the hydraulic connection enhances the transport of contaminants of concern from the landfill into groundwater. 80 Fed. Reg. at 21,362.

In fact, EPA found that, in some recently documented cases of water contamination from coal ash, the placement of large volumes of coal ash into highly permeable strata in the disposal area promoted ash-water interactions and consequently resulted in significant contamination of groundwater. *Id.* For example, from 1995 to 2006 in Anne Arundel County, Maryland, 4.6 million tons of coal ash “were placed directly in two sand and gravel quarries without a geomembrane liner or leachate collection system.” *Id.* “Rainwater infiltration into exposed [coal ash] coupled with groundwater-[ash] interactions and the transmissivity characteristics of local strata contributed to rapid migration of heavy metals, including antimony, arsenic, cadmium, nickel, and thallium to residential drinking water wells located near the [] pits and significant deterioration of water quality” as a result of ash placement. *Id.*; *see also* EPA Damage Case Compendium, Ex. 32. EPA also found that from 1980 to 1997 in Lansing, Michigan, around 500,000 tons of coal ash was dumped into a gravel pit with an elevated water table. 80 Fed. Reg. at 21,362. “A remedial investigation [] established that groundwater mounding [had] immersed the [coal ash] into the upper aquifer resulting in on-site exceedances of groundwater quality protection standards for sulfate, manganese, lead, selenium, lithium, and boron.” *Id.* EPA noted that placement of coal ash into “un-engineered, unlined units in permeable strata has plainly led to adverse impacts to groundwater.” *Id.*

Based on this clear evidence, EPA now requires separation from groundwater for all new and expanded coal ash landfills. In addition, “[t]he owner or operator of the landfill must obtain a certification from a qualified professional engineer stating that the demonstration” of separation meets the requirements of the rule. 40 C.F.R. § 257.60(b). For a new coal ash landfill or any such landfill expanding laterally, “[t]he owner or operator must complete the demonstration no later than the date of initial receipt” of coal ash in the new or expanded landfill. *Id.* § 257.60(c)(2). The owner or operator must place the demonstration in the facility’s operating record, submit a notification to the state, and post the demonstration on the landfill’s publicly available website. *Id.* §§ 257.60(c)(3), 257.105(e), 257.106(e) & 257.107(e). An owner or operator of a new coal ash landfill or lateral expansion who fails to make the demonstration showing compliance is prohibited from placing coal ash in the landfill or expansion. *Id.* § 257.60(c)(5).

PCA has not adequately characterized the hydrogeology of the site, including the elevation of the uppermost aquifer. Therefore PCA cannot assert that any portion of its landfill liner is in compliance with the state requirement of a five-foot separation. Because of this failure, ADEM must deny the permit renewal.

G. The Arrowhead Landfill Permit does not protect health and the environment because PCA is not required to make compliance data publicly available and accessible.

The Arrowhead Landfill permit lacks notification and posting requirements sufficient to ensure that residents of Uniontown are able to access groundwater monitoring data, inspections and other documents critical to the health and safety of their community and environment. Because the addition of coal ash to a MSWLF raises significant new threats and will cause substantial increases in the volume of waste disposed in the landfill, nearby residents must have prior notice of dumping as well as access to health and safety data during the operation of the facility. PCA is not required to make such information publicly available, although the CCR rule requires such disclosures for all coal ash landfills. Because Uniontown residents are not guaranteed the right to view critical compliance documents that provide information concerning monitoring, inspections, complaints, toxic releases, cleanup, closure and siting at the landfill, ADEM must deny the permit renewal and prohibit the disposal of coal ash in Arrowhead Landfill.

VI. ADEM MUST REVOKE THE PERMIT IN LIGHT OF THE ODORS, AIR POLLUTION AND FUGITIVE DUST EMISSIONS FROM THE LANDFILL TO WHICH NEARBY RESIDENTS HAVE BEEN EXPOSED FOR YEARS.

The Alabama Administrative Code requires all MSWLFs to ensure that they “do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to Section 110 of the Clean Air Act, as amended.” Ala. Admin. Code r. 335-13-4-.22(3)(a); *see also* Ala. SIP. Ala. Admin. Code r. 335-3-1-.02(1)(d), 335-3-1-.02(1)(e), 335-3-1-.02(1)(ss) & 335-3-1-.08, discussed below, have been approved by the Administrator of EPA as part of the State Implementation Plan for Alabama under section 110 of the Clean Air Act, 42 U.S.C. § 7410. *See* 40 C.F.R. §§ 52.50, 52.53.

The Alabama Administrative Code provides:

No person shall permit or cause air pollution, as defined in Rule 335-3-1-.02(1)(e) of this Chapter by the discharge of any air contaminant for which no ambient air quality standards have been set under Rule 335-3-1-.03(1).

Ala. Admin. Code r. 335-3-1.08.

As defined in Alabama’s regulations, “air pollution” means “the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life, or property, or would interfere with the enjoyment of life or property throughout the State and in such territories of the State as shall be affected thereby.” Ala. Admin. Code r. 335-3-1-.02(1)(e). “Air contaminant” means “any solid, liquid, or gaseous matter, any odor, or any combination thereof, from whatever source.” *Id.* r. 335-3-1-.02(1)(d). Lastly, “odor” means “smells or aromas which are unpleasant to persons or which tend to lessen human food and water intake, interfere with sleep, upset appetite, produce irritation of the upper respiratory tract, or cause symptoms or nausea, or which by their inherent chemical or physical nature or method or processing are, or may be, detrimental or dangerous to health. Odor and smell are used interchangeably herein.” *Id.* r. 335-3-1-.02(1)(ss).

In order to guard against odors, adequate cover material must be used. The Alabama Administrative Code provides that, during daily operation, all waste shall be covered as follows:

A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by the Department shall be added at the conclusion of each day’s operation or as otherwise approved by the Department to control disease vectors, fires, odors, blowing litter, and scavenging.

Id. r. 335-13-4-.22(1) (emphasis added).

Adequate confinement and compaction of waste is also a necessary precaution to ensure against air pollution. This precaution is enshrined in Alabama law. The Alabama Administrative Code provides:

All waste shall be confined to as small an area as possible and spread to a depth not exceeding two feet prior to compaction, and such compaction shall be accomplished on a face slope not to exceed 4 to 1 (25%) or as otherwise approved by the Department.

Id. r. 335-13-4.22(1)(b).

The same is true of adequate buffer zones and other control measures. The Alabama Administrative Code provides:

Buffer zones around the perimeter of the landfill unit shall be a minimum of 100 feet in width measured in a horizontal plane. No disposal or storage practices for waste shall take place in the buffer zone. Roads, access control measures, earth storage, and buildings may be placed in the buffer zone.

Id. r. 335-13-4-.12(2)(f).

Finally, ADEM's Solid Waste Regulations also provide that :

Notwithstanding this Rule, additional requirements for operating and maintaining a MSWLF may be imposed by the Department, as deemed necessary, to comply with the Act and this Division.

The foregoing authorize ADEM to require that landfill operations not result in offensive odors. In addition, the foregoing authorize ADEM to require the use of compacted earth as cover, to require that the depth of cover be more than six inches, to require that waste be covered more frequently than once each day, to prohibit leachate recirculation, and to further restrict the size of the working face. Moreover, the foregoing authorize ADEM to establish a larger buffer zone for aesthetic purposes, including odor reduction.

Yet the Arrowhead Landfill has, and continues to, expose nearby residents to air pollution in the form of odors. Over the years, residents have complained that the cover procedures at Arrowhead Landfill have been inadequate. Moreover, as discussed above, it is clear that the cover procedures at the Arrowhead Landfill, including the use of alternative cover materials, have failed and continue to fail to control odors.

As the daily operation of the landfill is required to control odors, disease vectors, and scavenging, but has failed to do so with adverse health and other effects on nearby residents, the permit should be revoked.

VII. ADEM SHOULD REJECT THE PERMIT APPLICATION BECAUSE ARROWHEAD'S FINANCIAL ASSURANCE DEMONSTRATION IS INADEQUATE.

PCA failed to comply with applicable financial assurance requirements. Arrowhead Landfill has a bond executed by Liberty Mutual Insurance Co., Travelers Casualty & Surety Co. of America, & Federal Insurance Co. on behalf of PCA and in favor of ADEM, in the amount of \$4,223,879.49 as of April 11, 2016. *See* Rider, Bond No. 018025070 (May 8, 2012), attached to Letter from Clint L. Courson, Hodges, Harbin, Newberry & Tribble, Inc., to Shane Lovett, ADEM (Apr. 25, 2016). This amount of financial assurance is deficient in a number of respects. Arrowhead's financial assurance calculations for both its closure costs and post-closure costs fail to consider and take account of all costs as required by the Alabama Administrative Code. *See, e.g.,* Ala. Admin. Code r. 335-13-4-.28, 335-13-4-.27(3)(b).

A. The Total Area Considered in Arrowhead's Closure Costs Is Insufficient.

PCA has failed to establish financial assurance for the full amount of acreage required by ADEM's regulations. ADEM's regulations require that financial assurance cover the cost of hiring a third party to close "the *largest* area of all landfill cells at the MSWLF ever requiring a final cover . . . at any time during the active life" of the facility. *Id.* r. 335-13-4-.28(2)(a) (emphasis added). PCA only provided a cost estimate for the area of the landfill *currently* needing a cover, which is described as the "remaining open area of 24.1 acres in Tract No. 1." Permit Application, Vol. 2, Closure Costs for Financial Assurance (ch. 10). Yet PCA anticipates operating three open faces simultaneously at the landfill. *See* Draft Permit § 3.J. In its proposed permit, PCA states that the total combined waste footprint of the facilities is 425.3 acres. Permit Application, Vol. 1 at 1. The financial assurances required by the Alabama Administrative Code are not restricted to the 24.1 acres (roughly 5 percent of the anticipated waste footprint) currently needing cover in Tract No. 1. PCA's cost estimate must include all areas that will need final cover during the active life of the landfill. As a result, PCA's financial assurance demonstration is not in compliance with Alabama requirements. ADEM "may deny, suspend or revoke any permit if: . . . the permittee is found to be in violation of any of the permit conditions." Ala. Admin. Code § 335-13-5-.05.

The deficiency of the financial assurance demonstration is even more concerning in light of the history of insolvency at the Arrowhead Landfill and the particularly large size of the landfill. Indeed, in January 2010, Perry County Associates, LLC and Perry Uniontown Ventures I,

LLC filed chapter 11 petitions. *See Abrahams v. Phill-Con Servs., LLC* (In re Perry Uniontown Ventures I, LLC), 2010 WL 3842026 at *1 (Bankr. S.D. Ala. Sept. 24, 2010). Until PCA can make an adequate financial assurance demonstration, ADEM must deny Arrowhead Landfill's permit renewal application.

B. State Regulations Require Monitoring Groundwater and Surface Water More Frequently than Contemplated in Arrowhead's Bond.

In Arrowhead's financial assurances calculations for post-closure costs, the amount estimated for groundwater and surface water only contemplates yearly monitoring. *See* Arrowhead Landfill, Post Closure Costs for Financial Assurance (updated Mar. 2016), attached to Letter from William F. Hodges, Hodges, Harbin, Newberry & Tribble, Inc. to Shane Lovett, ADEM (Mar. 23, 2016). (Indicating "Ea./Yr." in "Unit" column of groundwater and surface water monitoring). This runs afoul of the ADEM regulations that require semiannual monitoring during the post-closure period. *See* Ala. Admin. Code § 335-13-4-.27(3)(b) ("The monitoring frequency for all constituents listed in Appendix I, or in the alternative list approved in accordance with subparagraph (a)4 of this paragraph, shall be at least semiannual during the active life of the facility (including closure) and the post-closure period."). This difference doubles the required monitoring costs for groundwater and surface water. ADEM should not issue Arrowhead a permit renewal on the ground that Arrowhead's post-closure monitoring plan violates ADEM's post-closure monitoring requirements.

C. Arrowhead's Financial Assurance Discrepancies Demonstrate a Need for Additional Assurances to Adequately Protect ADEM, Uniontown, Taxpayers, and the State of Alabama.

The financial assurance demonstration for Arrowhead Landfill is inadequate. The history of insolvency of the owner/operators at the Landfill provides ample reason for ADEM to ensure the Uniontown community that the necessary amount for closure costs and post-closure costs of the Landfill has been provided. Granting Arrowhead's permit renewal application without adequate financial assurances from Green Group Holdings/Perry County Associates would put the local economy, environment, and public health at risk, adversely affecting ADEM, Uniontown citizens, and the state of Alabama.

VIII. ADEM SHOULD REVOKE GREEN GROUP HOLDING'S PERMIT APPLICATION BECAUSE THE CORPORATION LACKS THE CREDIBILITY AND RELIABILITY NECESSARY FOR ADEM TO GRANT A PERMIT

The credibility of a permit applicant is relevant in assessing its permit application. Under the Alabama Administrative Code, the Director of ADEM may deny a permit application if the applicant is “found to have submitted false or inaccurate information.” Ala. Admin. Code r. 335-13-14-.07(b). Furthermore, both the Alabama Administrative Code and EPA regulations require permit applicants to certify that its permit application is, to the best of its knowledge and belief, “true, accurate, and complete.” *Id.* r. 335-13-3-.02(5)(f); 40 C.F.R. § 122.22 (2016); *see also* 40 C.F.R. § 122.22(d) (EPA regulations establishing significant penalties for submitting false information). These requirements are all reflections of the importance of a permittee’s credibility and reliability. GGH’s record in Uniontown, *see supra* Section I.C, and elsewhere raises significant questions regarding GGH’s credibility and reliability, and thus the soundness of its permit application.

A. GGH Submitted A Landfill Application So Riddled With Errors And Discrepancies That Texas Regulators Were Forced To Reject It Completely, Raising Serious Credibility Issues For GGH.

In October 2015, the Texas Commission on Environmental Quality (“TCEQ”) rejected GGH’s application to develop its Pintail site for a municipal solid waste landfill after finding hundreds of errors within its permit application. *See* Letter from Earl Lott, Waste Permits Division Director, Tx. Comm’n on Env’tl. Quality, to Ernest Kaufmann, Pres., Green Group Holdings at 1 (Oct. 5, 2015), attached hereto as Ex. 35. Texas regulators determined that “[f]or the integrity of the municipal solid waste landfill program” the “only reasonable course available is to return the application as deficient.” *Id.* The serious errors and omissions found by Texas regulators speak to GGH’s willingness and ability to submit true, accurate, and complete information, in accordance with the Alabama Administrative Code and EPA regulations. *See* Ala. Admin. Code r. 335-13-3-.02(5)(f); 40 C.F.R. § 122.22(d).

TCEQ denied GGH’s permit application to develop the Pintail Landfill in Waller County, Texas because GGH’s permit application included “over 400 instances of deficiencies, resulting in four formal written notices of technical deficiencies.” *See* TCEQ Letter to GGH, Ex. 35 at 1. At the time GGH submitted its Pintail permit application to Texas regulators, it was under the same obligations as it is now, in its Arrowhead permit application, to provide complete, accurate, and clear information. Indeed, the same EPA regulations applied, and the Texas Administrative Code also provides that the submission of false information “shall constitute grounds for denial of the permit or registration application.” 30 Tex. Admin. Code § 330.57.

The documented errors and omissions committed by GGH in the Pintail permit application process and then later during the contested case hearing for the Pintail site include the following

- Green Group Holdings misreported the groundwater level by a difference of nearly 7 feet. Applicant's Motion for Continuance and Stay at 3, SOAH Docket No. 582-14-3597, TCEQ Docket No. 2012-0302-MSW, *In re Pintail Landfill LLC* (Tex. Office of Admin. Hearings July 22, 2015), *available at* <https://cis.soah.texas.gov/dmwebbasic/tokweb27.ASP?WCI=opendocument&SK EY=330269 0 9 63&localtimezone=240> ("[W]ater level measurements show groundwater levels that are significantly higher than those previously measured at the site, as much as nearly 7 feet higher."). This discrepancy was material to the siting of the landfill, as the correct groundwater level placed the proposed landfill bottom in contact with the site's groundwater. *Id.* at 4–5; *see also* City of Hempstead and Citizens Against the Landfill in Hempstead's Joint Motion for Sanctions Due to the Applicant's Spoliation of Evidence at 7–8, *In re Pintail Landfill LLC* (Aug. 14, 2015), attached hereto as Ex. 36.
- Green Group enforced prolonged restricted access to the Pintail site, thereby preventing outside groups from performing an independent analyses of the site's soil and groundwater resources. *See* Order No. 11 Memorializing Reconvened Prehearing Conference at 2, *In re Pintail Landfill LLC* (Jan. 29, 2015);, *available at* <https://cis.soah.texas.gov/dmwebbasic/tokweb27.ASP?WCI=opendocument&SK EY=301851 0 9 63&localtimezone=240> ("[T]he Owner is an absentee landlord, who has imposed onerous conditions on any person, other than Applicant or TCEQ Staff, requesting entry . . . The ALJs hereby order the parties to either resolve this matter. . . and if necessary, the ALJs will impose appropriate sanctions to remedy the lack of access to conduct reasonable discovery.").
- Green Group and/or its contractors and agents improperly disposed of evidence it used to assert potentially erroneous conclusions regarding the site's soil and groundwater, including soil samples and logs. Because of Green Group's failure to retain such information, independent evaluation by the State and public interest groups was made difficult or impossible. *See* Applicant's Supplemental Response to City of Hempstead and Citizens Against the Landfill in Hempstead's Second Joint Motion for Sanctions at 1–3, *In re Pintail Landfill LLC* (Sept. 25, 2015), *available at* <https://cis.soah.texas.gov/dmwebbasic/tokweb27.ASP?WCI=opendocument&SK EY=342660 0 9 63&localtimezone=240> (admitting failure to retain soil samples and field logs); *see also* Organization for the Environmental Health of

Hempstead's Response to Citizens Against the Landfill in Hempstead's & the City of Hempstead's Joint Motion for Sanctions Due to Applicant's Spoliation of Evidence at 2, *In re Pintail Landfill* (Sept. 25, 2015), *available at* <https://cis.soah.texas.gov/dmwebbasic/tokweb27.ASP?WCI=opendocument&SK EY=342080 0 9 63&localtimezone=240> ("By discarding field notes, original borings, and samples, the applicant has ensured that the protesting parties have no way of verifying the information that was included in the final boring logs included in the application. Unless an appropriate sanction is imposed, the parties, the ALJs, and TCEQ must simply accept, without an opportunity to verify, that the information included in the final boring logs is accurate. This contravenes basic rules of evidence and the legal principles associated with expert witnesses and their testimony."); Joint Motion for Sanctions, Ex. 36 at 46–48at.¹¹

- Green Group, through its contractors and agents, commenced earthmoving activities before a permit was issued. *See* Letter from Stephen C. Dickman, Kelly Hart, to ALJs Penny A. Wilkov & Elizabeth Drews, *In re Pintail Landfill LLC* (Oct. 31, 2014);, *available at* <https://cis.soah.texas.gov/dmwebbasic/tokweb27.ASP?WCI=opendocument&SK EY=289076 0 9 63&localtimezone=240>. Moreover, Green Group also drilled soil borings before obtaining TCEQ approval. *See* Deposition of John Michael Snyder at pp. 106–08, *In re Pintail Landfill LLC* (July 9, 2015), attached hereto as Ex. 40 (explaining that scientists drilled before TCEQ approval at Green Group's direction).
- Green Group thwarted plaintiff's ability to depose Applicant's witnesses, Bill Hutchison, Stefan Stamoulis, and Ernest Kaufmann, "by not producing relevant evidence in the witnesses' possession or by making objections and then instructing the witness not to answer the question" in violation of TRCP 199.5(t). *See* Order No. 12 Ruling on Discovery Issues at 5–7, *In re Pintail Landfill LLC* (Mar. 10, 2015), *available at*

¹¹ When draft soil boring logs were located during the discovery process in the contested case, at least one log showed significant differences between the initial log's recorded bottom layers of soil (sand "with abundant gravel, multicolored") and the final log's bottom layers of soil ("clay, light brown, hard, moist"). *Compare* *Pintail Landfill, Log of Boring No. BME-A5* (Feb. 17, 2011) ("Initial Soil Boring Log"), attached hereto as Ex. 37 *with* *Pintail Landfill, Log of Boring No. BME-A5* (July 18, 2011) ("Final Soil Boring Log"), attached hereto as Ex. 38; *see also* Deposition of John Michael Snyder at pp. 225–29, *In re Pintail Landfill LLC* (July 9, 2015, attached hereto as Ex. 39 (providing a narrative of the soil logs).

https://cis.soah.texas.gov/dmwebbasic/tokweb27.ASP?WCI=opendocument&SK EY=308164_0_9_63&localtimezone=240.

- Green Group improperly included testifying experts in privilege logs as “consulting[-only] experts,” attempting to shield those experts’ documents from discovery. *See id.* at 4 (“[T]he ALJs have considered and ruled based on whether the documents are privileged, relevant, drafts or final documents, and material related to the application, site selection, or owner or operator of the facility. Applicant is hereby ORDERED to produce the documents as identified in Attachment A. . . .”); *see also* Citizens Against the Landfill in Hempstead’s and City of Hempstead’s Joint Response to Pintail Landfill, LLC’s Motion for Continuance and Stay, *In re Pintail Landfill LLC* (July 30, 2015), *available at* https://cis.soah.texas.gov/dmwebbasic/tokweb27.ASP?WCI=opendocument&SK EY=331904_0_9_63&localtimezone=240.

In its decision to require withdrawal of Green Group’s permit proposal, TCEQ specifically focused on the large discrepancy between the height of the water table that Green Group had initially reported, as compared to information later found due to additional testing by an independent, outside group. *See* TCEQ Letter to GGH, Ex. 35 at 1; *see also* Applicant’s Motion for Continuance and Stay, *In re Pintail Landfill LLC* (. The result of independent tests were significantly different, which raised additional questions about Green Group’s credibility. The new data showed there were portions of proposed excavations that would extend below the new seasonal high water level. Affidavit of John Michael Snyder, P.G. at 2 (sworn to on July 22, 2015), Attach. 3 to Letter from Brent W. Ryan, Pintail Landfill, to ALJs (Sept. 21, 2015)(“Status Report”), *In re Pintail Landfill LLC*). (“Applicant’s Supplement to Motion to Remand Permit Application”), *available at* https://cis.soah.texas.gov/dmwebbasic/tokweb27.ASP?WCI=opendocument&SKEY=341101_0_9_63&localtimezone=240. The stark difference in the water levels found affected “nearly every aspect of the [permit] application. . . .” Applicant’s Motion for Continuance and Stay at 4, *In re Pintail Landfill* . Accordingly, over Green Group’s objection, TCEQ recommended that the Pintail permit be withdrawn completely.. TCEQ’s findings of intentional inaccuracies and obfuscation raise serious questions as to its credibility and ability to provide accurate information to state regulatory agencies, including ADEM. Given the record in the Pintail permit application process and contested case hearing, ADEM has a responsibility to further investigate the data that Green Group has provided to support the Arrowhead landfill application.

B. The Pintail Application Raises Fundamental Concerns About The Credibility Of GGH And The Arrowhead Permit Application.

The deficiencies found in GGH's Pintail Application raises significant questions about its permit application for Arrowhead Landfill. For example, because GGH is now seeking to raise the elevation of its cells at the Arrowhead site, it is possible that a problem Texas regulators found central to the deficiency of the Pintail application is now a serious issue at Arrowhead Landfill. The proposed permit submitted by PCA, a wholly owned subsidiary of GGH, requires that the elevation of the landfill cell liners to be at least 5 feet above the highest seasonal water table. See Draft Permit § III.E ("The base of the composite liner system shall be a minimum of five (5) feet above the temporal fluctuation of the groundwater table."). GGH is proposing to raise the elevation of its landfill cell floors by 10 feet, which suggests there may be groundwater exposure issues similar to found at the Pintail site. *Id.*; see Snyder Aff. At 2, *In re Pintail Landfill* (explaining that new data showed there were portions of proposed excavations that would extend below the new seasonal high water level), *available at* https://cis.soah.texas.gov/dmwebbasic/tokweb27.ASP?WCI=opendocument&SKEY=341101_09_63&localtimezone=240. Indeed, the Arrowhead permit application calls for this change in the elevation of its cells by 10 feet without an adequate explanation. *Id.* This proposal echoes the insufficiently addressed concerns raised in Pintail.

Since GGH has inaccurately reported crucial water table level data in the past, GGH's request to raise its cells by 10 feet without an explanation concerning Arrowhead's requested modification could indicate that GGH has already encountered issues with a higher-than-reported water level at Arrowhead Landfill, or has new information that it is not sharing with ADEM or the public regarding the water level or its contact with its landfill cells. Under Alabama Administrative Code, ADEM is required to "conduct a site background hydrogeological evaluation and review all other related reports, plans or submittals" with expenses borne by the applicants. Ala. Admin Code r. 335-13-4-.13(3). Under this provision, ADEM is responsible for verifying that GGH's Arrowhead site is above the necessary height over the water table level. As in Texas, this is an issue that affects "nearly every aspect of the application," and ADEM has a responsibility to independently verify GGH's reports. Applicant's Motion for Continuance and Stay at 4, *In re Pintail Landfill LLC*. ADEM should not grant PCA's permit renewal application until such a full evaluation is performed.

Besides the concern that GGH has inaccurately reported water table levels in the past, there are other reasons for concern regarding the landfill cells' exposure to groundwater. In several inspections, seepage issues were reported. ADEM August 2013 Inspection Report ("Please ... repair leachate seeps."); ADEM November 2013 Inspection Report ("Please continue working on cell 1 to reduce ponding of stormwater."); ADEM February 2014 Inspection Report ("Leachate levels at two pumps were high — 42" and 110". Mr. Metcalfe immediately had leachate hauling trucks sent to the landfill to pump down the leachate tank and had pumps turned on to reduce leachate levels on the liner back to 30cm. The trucks were unable haul leachate at the end of last week due to the snowstorm."); ADEM April 2014 Inspection Report: ("Continue working to correct seep on cell 1. ... Continue working to correct drainage in cell 6A so leachate more easily passes to bottom of cell."); July 2014 Inspection Report ("Seep on cell 1 had been repaired since last inspection."). Since there have also been numerous complaints about surface water discharges, there may be reason to believe that cells in the Arrowhead landfill may be having liner failure issues, allowing leachate to be discharged through seeps -- which have been documented by ADEM investigators—into surface water. Until the integrity of Arrowhead's cell liners can be verified and the water table level determined across the Landfill site, Arrowhead's permit renewal application should be denied.

CONCLUSION

ADEM should reject the application by PCA for a permit to continue to operate Arrowhead Landfill. Given the history of this site – even if the permit deficiencies described above were remedied in an amended permit, it would be unconscionable for ADEM to approve yet another permit that allows the disposal of "special waste" and to permit this site to continue to be a dumping ground for coal ash – potentially for the majority of U.S. states. The applicant has not established site hydrogeology to the uppermost aquifer or even established a monitoring network that can effectively determine adverse impacts, as required by ADEM Admin. Code r. 335-13-4-.13. Consequently, ADEM cannot determine the impacts of dumping toxic waste at Arrowhead Landfill or predict future impacts from additional dumping. Moreover, the owner/operator's record concerning past management of toxic coal ash indicates a blatant disregard for public health and the environment. Approval of PCA's application for permit renewal would amount to an abdication of ADEM's responsibility to protect public health and the environment in contravention of the Solid Wastes and Recyclable Materials Management Act, Ala. Code §§ 22-27-1 to 22-27-27.

Significantly, ADEM's requirements governing the disposal of coal ash continue to be less stringent than if the coal ash was disposed in a coal ash landfill operating under the EPA's new coal ash rule. Though current federal law allows MSWFs to accept coal ash (and the status of the federal law is not the subject of these comments), coal ash contains hazardous heavy metals. The people of Uniontown have already borne the impact of the coal ash imported from Tennessee. Because the residents of Uniontown deserve protection at least equal to the protection afforded communities near all other coal ash landfills, ADEM must prohibit disposal of coal ash in the Arrowhead Landfill.

Ultimately, ADEM must fulfill its duty to protect all residents of the state against any further harm to their health and welfare.

Sincerely,

/s/Marianne Engelman Lado

Marianne Engelman Lado

Lisa Evans

Tania Galloni

Thom Cmar

Allison Kvien*

EARTHJUSTICE

** Bar admission pending*